

**COUNTY OF SAN DIEGO**

**GUIDELINES FOR DETERMINING SIGNIFICANCE**

**AND**

**SURVEY, REPORT FORMAT, CONTENT AND**

**MAPPING REQUIREMENTS**

**BIOLOGICAL RESOURCES**



**LAND USE AND ENVIRONMENT GROUP**

**Department of Planning and Land Use**  
**Department of Public Works**

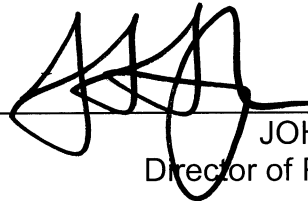
**September 26, 2006**

## APPROVAL

I hereby certify that these **Guidelines for Determining Significance and Report Format and Content Requirements for Biological Resources** are a part of the County of San Diego, Land Use and Environment Group's Guidelines for Determining Significance and Technical Report Format and Content Requirements and were considered by the Director of Planning and Land Use, in coordination with the Director of Public Works on the 26<sup>th</sup> day of September, 2006.



GARY PRYOR  
Director of Planning and Land Use



JOHN SNYDER  
Director of Public Works



Attest: ERIC GIBSON  
Deputy Director of Planning and Land Use

I hereby certify that these **Guidelines for Determining Significance and Report Format and Content Requirements for Biological Resources** are a part of the County of San Diego, Land Use and Environment Group's Guidelines for Determining Significance and Technical Report Format and Content Requirements and have hereby been approved by the Deputy Chief Administrative Officer (DCAO) of the Land Use and Environment Group on the 26<sup>th</sup> day of September, 2006. The Director of Planning and Land Use is authorized to approve revisions to these Guidelines for Determining Significance and Report Format and Content Requirements for Biological Resources, except any revisions to the Guidelines for Determining Significance presented in Chapter 4.0 must be approved by the Deputy CAO.

Approved, September 26, 2006



CHANDRA WALLAR  
Deputy CAO

**COUNTY OF SAN DIEGO**

**GUIDELINES FOR DETERMINING SIGNIFICANCE**

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**Department of Public Works**

**September 26, 2006**

## **EXPLANATION**

These Guidelines for Determining Significance for Biological Resources and information presented herein shall be used by County staff for the review of discretionary projects and environmental documents pursuant to the California Environmental Quality Act (CEQA). These Guidelines present a range of quantitative, qualitative, and performance levels for particular environmental effects. Normally, (in the absence of substantial evidence to the contrary), an affirmative response to any one Guideline will mean the project will result in a significant effect, whereas effects that do not meet any of the Guidelines will normally be determined to be “less than significant.” Section 15064(b) of the State CEQA Guidelines states:

“The determination whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on factual and scientific data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting.”

These Guidelines shall assist in providing a consistent, objective and predictable evaluation of significant effects. These Guidelines are not binding on any decision-maker and should not be substituted for the use of independent judgment to determine significance or the evaluation of evidence in the record. The County reserves the right to modify these Guidelines in the event of scientific discovery or alterations in factual data that may alter the common application of a Guideline.

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## **List of Acronyms**

ACOE	Army Corps of Engineers
BMO	Biological Mitigation Ordinance
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CSS	Coastal Sage Scrub
DPLU	Department of Planning and Land Use
DPR	Department of Parks and Recreation
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FMP	Framework Management Plan
HCP	Habitat Conservation Plan
HLP	Habitat Loss Permit
HMP	Habitat Management Plan
MBTA	Migratory Bird Treaty Act
MSCP	Multiple Species Conservation Program
NCCP	Natural Communities Conservation Plan
RCA	Resource Conservation Areas
RPO	County of San Diego Resource Protection Ordinance
SAMP	Special Area Management Plan
USFWS	United States Fish and Wildlife Service
USC	United States Code

## INTRODUCTION

This document provides guidance for evaluating adverse environmental effects that a proposed project may have on biological resources. These Guidelines should be consulted during the evaluation of any biological resource pursuant to CEQA. Specifically, this document addresses the following questions listed in the California Environmental Quality Act (CEQA) Guidelines, Appendix G, IV. Biological Resources and IX. Land Use and Planning:

### IV. Biological Resources – Would the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?

### IX. Land Use and Planning – Would the project:

- c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

### XVII. Mandatory Findings of Significance

- a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or

wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

- b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

## **1.0 GENERAL PRINCIPLES AND EXISTING CONDITIONS**

San Diego County has long been known as a unique environment for biological resources. Both the number and diversity of the habitats and species present in the County far exceeds that of most other counties in the United States. Several factors are responsible for this unique biological environment, including climate, geology, topography, microhabitats, and endemism.

The loss of native habitat to development and agricultural uses over the last several decades has caused many of the region’s biological resources to become increasingly rare. Some habitat types now occupy less than 5-10% of their historical range. The majority of habitat loss has occurred along the coast and inland mesas. Hence, most of the habitat types that have experienced the greatest losses and are now considered the most sensitive are found within these areas, such as southern maritime chaparral, vernal pools, coastal bluffs and dunes, maritime succulent scrub and freshwater habitats. Other habitat types, such as coastal sage scrub, grasslands, oak woodlands and various chaparral habitats are becoming more sensitive as residential development extends further into previously rural areas in the north and along the eastern foothills of the County.

The far eastern parts of the County, from the mountain areas to the desert regions, have been left relatively intact thus far and may remain so given that large portions of these areas are publicly owned. However, some habitat types in these areas, such as coniferous forest, Colorado Desert wash scrub, desert dunes, and desert sink scrub, are still considered sensitive for reasons other than historical loss, such as limited distribution, the potential to host sensitive species, or the inability to recover from disturbance.

Today, San Diego supports over 400 sensitive plants and animals. These species range from uncommon to critically endangered. Some of these species require immediate, proactive measures, particularly those that are already listed as threatened or endangered. For others, extirpation or extinction is not quite so imminent, but their long-term survival may depend upon the precautionary actions taken now, including ensuring that a sufficient amount of native habitat is preserved in a viable manner. Refer to Tables 2 and 3 for lists of County-sensitive plants and wildlife.

Most of the County's conservation policies focus on preservation at the ecosystem and habitat level. The single species approach is only used for particularly sensitive species or those species with unusual life history needs. In all cases, any single-species methods are used in conjunction with the habitat or ecosystem-level approach. The County of San Diego has established policies that aim to balance the needs of humans with the need to protect biological resources. The County's policies have been designed to maintain the optimal health and viability of each ecosystem and habitat given the existing and potential environmental conditions and constraints.

## **2.0 EXISTING REGULATIONS AND STANDARDS**

Several Federal, State and local regulations have been established to protect and conserve biological resources. The descriptions below provide a brief overview of the most appropriate regulations and their respective requirements.

### **2.1 Federal Regulations and Standards**

#### **Federal Endangered Species Act<sup>1</sup>**

[\[http://www4.law.cornell.edu/uscode/16/ch35.html\]](http://www4.law.cornell.edu/uscode/16/ch35.html)

Enacted in 1973, the Endangered Species Act (ESA) provides for the conservation of threatened and endangered species and their ecosystems. The Act prohibits the "take" of threatened and endangered species except under certain circumstances and only with authorization from the U.S. Fish and Wildlife Service (USFWS) through a permit under Section 4(d), 7 or 10(a) of the Act. Under the Endangered Species Act, "take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

#### **Migratory Bird Treaty Act<sup>2</sup>**

[\[http://www4.law.cornell.edu/uscode/16/ch7schII.html\]](http://www4.law.cornell.edu/uscode/16/ch7schII.html)

Congress passed the Migratory Bird Treaty Act (MBTA) in 1918 to prohibit the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. The prohibition applies to birds included in the respective international conventions between the U.S. and Great Britain, the U.S. and Mexico, the U.S. and Japan, and the U.S. and Russia.

#### **Bald and Golden Eagle Protection Act<sup>3</sup>**

[\[http://www4.law.cornell.edu/uscode/html/uscode16/usc\\_sup\\_01\\_16\\_10\\_5A\\_20\\_II.html\]](http://www4.law.cornell.edu/uscode/html/uscode16/usc_sup_01_16_10_5A_20_II.html)

When first enacted in 1940, the Act prohibited the take, transport or sale of bald eagles, their eggs or any part of an eagle except where expressly allowed by the Secretary of Interior. The Act was amended in 1962 to extend the prohibitions to the golden eagle.

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<sup>1</sup> U.S.C Title 16, Chapter 35, Sections 1531-1544.

<sup>2</sup> U.S.C Title 16, Chapter 7, Subchapter II, Sections 703-712.

<sup>3</sup> U.S.C Title 16, Chapter 5A, Subchapter II, Sections 668 a-d.

## **Federal Water Pollution Control Act (Clean Water Act), 1972<sup>4</sup>**

[\[http://www4.law.cornell.edu/uscode/33/ch26.html\]](http://www4.law.cornell.edu/uscode/33/ch26.html)

The Federal Water Pollution Control Act was first passed by Congress in 1948. The Act was later amended and became known as the Clean Water Act. The Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States. It gives the U.S. Environmental Protection Agency (EPA) the authority to implement pollution control programs, including setting wastewater standards for industry and water quality standards for contaminants in surface waters. The Act makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, without a permit under its provisions. Clean Water Act 404 permits are issued by the U.S. Army Corps of Engineers for dredge/fill activities within wetlands or non-wetland waters of the U.S. Clean Water Act 401 certifications are issued by the Regional Water Quality Control Board for activities requiring a federal permit or license which may result in discharge of pollutants into waters of the U.S.

## **2.2 State Regulations and Standards**

### **California Environmental Quality Act (CEQA)<sup>5</sup>**

[\[http://ceres.ca.gov/topic/env\\_law/ceqa/guidelines/\]](http://ceres.ca.gov/topic/env_law/ceqa/guidelines/)

The California Environmental Quality Act requires that biological resources be considered when assessing the environmental impacts resulting from proposed actions. CEQA does not specifically define what constitutes an “adverse effect” on a biological resource. Instead, lead agencies are charged with determining what specifically should be considered an impact.

### **California Fish and Game Code**

[\[http://www.leginfo.ca.gov\]](http://www.leginfo.ca.gov)

The California Fish and Game (CFG) Code regulates the taking or possession of birds, mammals, fish, amphibia and reptiles, as well as natural resources such as wetlands and waters of the state. It includes the California Endangered Species Act (CESA; Sections 2050-2115) and Streambed Alteration Agreement regulations (Section 1600-1616), as well as provisions for legal hunting and fishing, and tribal agreements for activities involving take of native wildlife.

### **California Endangered Species Act<sup>6</sup>**

[\[http://www.leginfo.ca.gov\]](http://www.leginfo.ca.gov)

The California Endangered Species Act (CESA) generally parallels the main provisions of the Federal Endangered Species Act (ESA) and is administered by the California Department of Fish and Game (CDFG). The CESA prohibits take of any species that the California Fish and Game Commission determines to be a threatened or endangered species. CESA allows for take incidental to otherwise lawful development projects upon approval from CDFG. Under the California Fish and Game Code, “take”

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<sup>4</sup> U.S.C Title 33, Ch.26, Sub-Ch.I-VI.

<sup>5</sup> PRC, § 21000 et. seq. and the State CEQA Guidelines, CCR, §15000 et seq.

<sup>6</sup> California Fish and Game Code, Division 3, Chapter 1.5, Sections 2050-2115.

is defined as to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.

### **Porter-Cologne Water Quality Control Act<sup>7</sup>**

[\[http://www.leginfo.ca.gov\]](http://www.leginfo.ca.gov)

This Act provides for statewide coordination of water quality regulations. The Act established the California State Water Resources Control Board as the statewide authority and nine separate Regional Water Quality Control Boards to oversee water quality on a day-to-day basis at the regional/local level.

### **Natural Community Conservation Planning (NCCP) Act of 1991<sup>8</sup>**

[\[http://www.dfg.ca.gov/nccp/displaycode.html\]](http://www.dfg.ca.gov/nccp/displaycode.html).

The NCCP Act is designed to conserve natural communities at the ecosystem scale while accommodating compatible land use. The California Department of Fish and Game is the principal state agency implementing the NCCP Program. NCCP Plans developed in accordance with the Act provide for comprehensive management and conservation of multiple wildlife species and identify and provide for the regional or area-wide protection and perpetuation of natural wildlife diversity while allowing compatible and appropriate development and growth.

## **2.3 Local Regulations and Standards**

### **San Diego County General Plan – Open Space Element (Part I), Conservation Element (Part X), and Community and Subregional Plans**

[\[http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/zoning/\]](http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/zoning/)

The Open Space Element and the Conservation Element of the General Plan provide guiding principles for the conservation of biological resources. The Open Space Element outlines the goals and policies pertaining to each type of open space, not all of which are for the preservation of biological resources. The Conservation Element, specifically Chapters 3 and 4 address County policies relating to water, vegetation and wildlife habitat. Appendix K of the Conservation Element outlines the County's Resource Conservation Areas (RCA), which are further described and delineated in each of the Community and Subregional Plans. Each RCA has been designated as such for a purpose specific to that area. When a site is located within a mapped RCA, the project must comply with the relevant policies for that RCA (i.e., avoidance of oaks, etc.).

### **County of San Diego Zoning Ordinance**

[\[http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/zoning/\]](http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/planning/zoning/)

Land may also have a zoning designation or Special Area Regulation with certain restrictions pursuant to the Zoning Ordinance. For instance, lands may have a zoning designation of S81 Ecological Resource Area Regulations. The few uses allowed on lands with this designation are subject to strict provisions and limitations. The Zoning Ordinance also applies other Special Area Regulations with specific restrictions and

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<sup>7</sup> California Water Code, Division 7, Sections 13000-14958.

<sup>8</sup> Section 2800 et. seq. of the California Fish and Game Code, as amended January 1, 2003 (Chapter 4, sections 1 and 2 of California statutes 2002).

provisions, including designator G (Sensitive Resource), R (Coastal Resource Protection Area) and/or V (Vernal Pool Area).

### **Multiple Species Conservation Program and Biological Mitigation Ordinance<sup>9</sup>**

[\[http://www.sdcountry.ca.gov\]](http://www.sdcountry.ca.gov)

The MSCP is a long-term regional conservation plan designed to establish a connected preserve system that protects the County's sensitive species and habitats. The MSCP covers 582,243 acres over 12 jurisdictions. Each jurisdiction will have their own subarea plan to be implemented separately from one another. The subarea plan for the County's jurisdiction covers 252,132 acres in the southwestern portion of the unincorporated lands. The County Subarea Plan is regulated by the Biological Mitigation Ordinance, which outlines the specific criteria and requirements for projects within the MSCP boundaries. The County Subarea Plan (adopted October 1997), the BMO (adopted March 1998), the Final MSCP Plan (dated August 1998) and the Implementation Agreement (signed March 1998) between the County and Wildlife Agencies are the documents used to implement the MSCP.

The MSCP and BMO provide specific criteria for project design, impact allowances and mitigation requirements. The criteria contained within this document do not replace those required by the MSCP. All projects within the MSCP boundaries must conform to both the MSCP requirements and the County's policies under CEQA.

### **Resource Protection Ordinance<sup>10</sup>**

[\[http://www.sdcountry.ca.gov\]](http://www.sdcountry.ca.gov)

The Resource Protection Ordinance (RPO) was adopted in 1989 and later amended in 1991. RPO restricts to varying degrees impacts to various natural resources including wetlands, wetland buffers, floodplains, steep slopes, sensitive habitat lands and historical sites. Certain permit types are subject to the requirement to prepare Resource Protection Studies under the RPO.

RPO states that no impacts may occur to lands determined to be wetlands as defined by the ordinance, except those impacts related to aquaculture, scientific research and/or wetland restoration projects. In addition, the ordinance requires that a wetland buffer be provided to further protect the wetland resources. Access paths, improvements necessary to protect the adjacent wetlands and those uses allowed within the actual wetland are the only allowed uses within the buffer. No impacts caused by activities other than these specifically mentioned shall be allowed. For more explicit information on these requirements refer to RPO.

RPO also limits impacts to sensitive habitat lands. Sensitive habitat lands include unique vegetation communities and/or the habitat that is either necessary to support a viable population of sensitive species, is critical to the proper functioning of a balanced

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<sup>9</sup> County of San Diego, Multiple Species Conservation Program (MSCP), County of San Diego Subarea Plan, 1997 and County of San Diego, Biological Mitigation Ordinance, (Ord. Nos. 8845, 9246) 1998 (new series).

<sup>10</sup> County of San Diego, Resource Protection Ordinance, 1991 (Ord. Nos. 7968, 7739, 7685 and 7631).

natural ecosystem or which serves as a functioning wildlife corridor. Impacts shall only be allowed when: (1) all feasible measures have been applied to reduce impacts; and (2) mitigation provides an equal or greater benefit to the affected species.

The ordinance includes the provision that when “the extent of environmentally sensitive lands on a particular legal lot is such that no reasonable economic use of such lot would be permitted by these regulations, then an encroachment into such environmentally sensitive lands to the minimum extent necessary to provide for such reasonable use may be allowed”.

### **Habitat Loss Permit Ordinance<sup>11</sup>**

[\[www.amlegal.com\]](http://www.amlegal.com)

The Habitat Loss Permit (HLP) Ordinance was adopted in March of 1994 in response to both the listing of the California gnatcatcher, as a Federally threatened species, and the adoption of the Natural Communities Conservation Plan (NCCP) by the State of California. Pursuant to the Special 4(d) Rule under the ESA, the County is authorized to issue “take permits” for the California gnatcatcher (in the form of Habitat Loss Permits) in lieu of Section 7 or 10(a) Permits typically required from the US Fish and Wildlife Service. Although issued by the County, the wildlife agencies must concur with the issuance of a HLP for it to become valid as take authorization under the ESA.

The HLP Ordinance states that projects must obtain a Habitat Loss Permit prior to the issuance of a grading permit, clearing permit or improvement plan if the project will directly or indirectly impact any of several coastal sage scrub (CSS) habitat types. The Ordinance requires an HLP if CSS or related habitat will be impacted, regardless of whether the site is currently occupied by gnatcatchers. HLPs are not required for projects within the boundaries of the Multiple Species Conservation Program since take authorization is conveyed to those projects through compliance with the MSCP. HLPs are also not required for projects that have separately obtained Section 7 or 10(a) permits for take of the gnatcatcher. For more explicit information on these requirements refer to the HLP Ordinance.

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<sup>11</sup> County of San Diego, An Ordinance Amending the San Diego County Code to Establish a Process for Issuance of the Coastal Sage Scrub Habitat Loss Permits and Declaring the Urgency Thereof to Take Effect Immediately, Ordinance No. 8365. 1994, Title 8, Div 6, Ch. 1. Sections 86.101-86.105, 87.202.2.

### **3.0 TYPICAL ADVERSE EFFECTS**

Any action that results in the loss or degradation of a biological resource is considered an adverse effect. The most obvious adverse effect is the direct removal of a resource, such as clearing of habitat or the take of a species. Although not as apparent, indirect impacts can be as harmful as direct impacts. In fact, indirect impacts can adversely affect species or habitat to the extent that it is effectively equivalent to removing the resource.

Significant adverse effects may result from one or more direct, indirect and/or cumulative impacts (CEQA Sections 15358 and 15355). The following describes each of these types of impacts relative to biological resources:

#### **3.1 Direct Impacts**

Direct impacts are those that are generally obvious, absolute or quantifiable. The removal of habitat from grading or clearing is the most common direct impact. Other examples of direct impacts would include the construction of a substantial barrier in a wildlife corridor (the direct impact being to wildlife movement) or the loss of habitat occupied by a certain species (the direct impact being to that particular species). Direct impacts may occur through the project itself or actions necessary to implement the project (e.g., construction staging areas).

#### **3.2 Indirect Impacts**

Indirect impacts may be the result of secondary effects from direct impacts or those impacts that over time cause the degradation of a resource by changing its function, health or quality. Unlike direct impacts which are typically one-time effects, indirect impacts often continue in the long term and may actually increase.

Indirect impacts commonly result from a project's "edge effects." Edge effects from development may extend several hundred feet into adjacent open space areas, causing significant changes in species composition, diversity and abundance in those nearby lands. Projects can have a wide variety of indirect impacts depending on the nature of the project, the type of resources present, and the type and degree of edge effects.

Projects can also cause a decline in the availability of a resource, such as water or prey, or change the habitat viability by altering the moisture regime or vegetation present, thereby adversely affecting a biological resource. Projects may cause habitat fragmentation, loss of ecosystem and watershed integrity, and may affect ecosystems and natural systems through changes in the pattern of land use, and population density or growth rate. Indirect impacts have been addressed in multiple species recovery plans, reports, journal articles and conferences. These Guidelines were created based on the best available science and most common standards followed by the wildlife agencies, conservationists and biologists. On a case-by-case basis, other measurable standards may apply.

### **3.3 Cumulative Impacts**

Cumulative impacts are those caused by the additive effect of multiple direct and indirect impacts to a biological resource over time. A project's direct and indirect impacts may not be individually significant, but the additive effect when viewed in connection with the impacts of past projects, present and probable future projects may cause the significant loss or degradation of a resource. For instance, a creek may be impacted directly and indirectly from road crossings, buffer encroachment and edge effects, all of which cumulatively cause the overall degradation of the creek.

A project may have significant cumulative effects notwithstanding the project's conformance with a regulatory program or existing mitigation plan such as a Habitat Conservation Plan (HCP) or Natural Communities Conservation Plan (NCCP). For example, species may become listed that were not addressed in the adopted plan, or insufficient information was available at the time of plan adoption.

### **3.4 Permanent and Temporary Impacts**

Direct, indirect, and cumulative impacts can be described in more detail relative to whether they are permanent or temporary. Permanent impacts to biological resources would result from a permanent direct loss of those resources as an area is converted to another condition (e.g., developed, ornamental landscaping, agriculture, etc.), or an indirect impact (e.g., edge effects) that will persist and is permanent.

Direct impacts may be considered temporary when an area could be restored to its pre-impact condition thus providing habitat and wildlife functions and values effectively equal to the functions and values that existed before the area was impacted.

## **4.0 GUIDELINES FOR DETERMINING SIGNIFICANCE**

This section provides guidance for evaluating adverse environmental effects a project may have on biological resources. These Guidelines are organized into five subject areas, based on the State CEQA Guidelines. There may be some types of impacts that need to be evaluated under more than one subject area.

These Guidelines were established using a variety of resources. Some are the result of an extensive literature search covering scientific texts, journal articles, regional studies and regulatory documents. Others were developed during the creation of the MSCP based on modeling and species analysis. In the event that there was no conclusive scientific data to support a specific Guideline, such Guidelines have not been included. Best available science was used in establishing these Guidelines, but the Guidelines will be modified when scientific evidence to support a new Guideline becomes available. Any person may provide suitable scientific evidence for consideration in modifying the standards presented in this section and the information shall be considered and applied, as approved by the County. Additional site-specific Guidelines may be applied where relevant circumstances dictate as approved by the County. Please note that due to the

extensive list of references and multiple sources for each Guideline, all references are listed at the end of this document.

It is important to note that quantification standards are provided as a guidance tool only and specific conditions may vary based on specific site conditions and/or circumstances as well as the best available scientific information regarding a species' biology. Values are provided as a tool for assessing the need to consider the potential for a significant effect to exist and the requirement to specifically address the issues raised in this section.

Before a determination of the significance of an impact can be made, the presence, nature and extent of the biological resources must be established per the County's Biological Survey, Report Format, Content and Mapping Requirements.

**An affirmative response to or confirmation of any one of the following Guidelines will generally be considered a significant impact related to biology as a result of project implementation, in the absence of scientific evidence to the contrary:**

#### **4.1 Special Status Species**

**Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

The following information should be evaluated to provide evidence to support a conclusion of impact significance.

- A. The project would impact one or more individuals of a species listed as federally or state endangered or threatened.<sup>12</sup>
- B. The project would impact the regional long-term survival of a County Group A or B plant species, or a County Group I animal species, or a species listed as a state Species of Special Concern. Impacts of less than 5 percent of an existing population (as defined by this document) could only be considered less than significant if a biologically-based determination can be made that the project would not have a substantial adverse effect on the regional long-term survival of that plant or animal. Impacts to 5 percent or more of the population are generally considered significant.<sup>13</sup>

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<sup>12</sup> Significance guideline 4.1.A. Impacts to federally and/or state listed species are always considered significant.

<sup>13</sup> Significance guidelines 4.1.B, 4.1.C. The County has divided sensitive species into groups based on their rarity and known threats. Plant species are divided into Groups A through D on the County Rare Plant List (Table 2). Animals are divided into Groups I and II on the Sensitive Animal List (Table 3). Groups A and B Plants and Group I Animals include those that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirements that must be met. Groups C and D Plants and Group II Animals include those species that are becoming less common, but are not yet so rare that extirpation or extinction is imminent without

- C. The project would impact the regional long-term survival of a County Group C or D plant species or a County Group II animal species.
- D. The project may impact arroyo toad aestivation or breeding habitat. Any alteration of suitable habitat within 1 kilometer (3,280 feet) in any direction of occupied breeding habitat (unless very steep slopes or other barriers constrain movement) could only be considered less than significant if a biologically-based determination can be made that the project would not impact the aestivation or breeding behavior of arroyo toads.<sup>14</sup>
- E. The project would impact golden eagle habitat. Any alteration of habitat within 4,000 feet of an active golden eagle nest could only be considered less than significant if a biologically-based determination can be made that the project would not have a substantially adverse effect on the long-term survival of the identified pair of golden eagles.<sup>15</sup>
- F. The project would result in a loss of functional foraging habitat for raptors. Alteration of less than 5 acres of foraging habitat could only be considered less than significant if a biologically-based determination can be made that the project would not have a substantially adverse effect on the regional long term survival of any raptor species.
- G. The project would increase noise and/or nighttime lighting to a level above ambient proven to adversely affect sensitive species.<sup>16</sup>
- H. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or an area that supports multiple wildlife species. Alteration of

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immediate action. These species tend to be prolific within their suitable habitat types. The term “regional” is defined as within San Diego County.

<sup>14</sup> Significance guideline 4.1.D. Arroyo toads breed in wetland areas, but require upland habitats for aestivation (similar to hibernation). Studies have shown that arroyo toads will travel up to 1 kilometer (0.62 miles) from wetlands, but there is no definitive study to show the absolute minimum distance that arroyo toads require for all of their life history needs. The USFWS model used to identify and map areas essential to this species determined that areas up to 25m (80 feet) in elevation above the stream channel were most likely to contain the primary constituent upland habitat elements essential to the species. Until such time that a more definitive study is completed, the County will use a width and elevation most often used by the wildlife agencies and amphibian experts.

<sup>15</sup> Significance guideline 4.1.E. Only a limited number of active golden eagle nests remain in San Diego County. This guideline applies a 4000-foot no-disturbance zone around golden eagle nests. If the project proposes a use that will have little to no long-term effects, such as the construction of a wireless telecommunications facility or improvements to an existing road, the project may proceed with appropriate mitigation during the non-breeding season without having significant effects. Long-term uses within the 4000-foot zone, including most development and recreational uses, are considered significant impacts to golden eagles even if the initial grading, clearing and construction were completed outside of the breeding season. The analysis completed during the creation of the MSCP found the 4000-foot no-disturbance to be necessary for the long-term viability of the existing active nests. Given the lack of any contrary scientific evidence, the County will also use the 4000 zone criteria outside of the MSCP.

<sup>16</sup> Significance guideline 4.1.G. Some studies such as the Bioacoustics Research Team (1997) concluded that 60dBA is a single, simple criterion to use as a starting point for passerine impacts until more specific research is done. Factors that may be considered include, but are not limited to, song and noise frequencies and levels and temporal shifts (time of day, steady vs. intermittent, etc.) for the sensitive species.

any portion of a core habitat could only be considered less than significant if a biologically-based determination can be made that the project would not have a substantially adverse effect on the core area and the species it supports.

- I. The project would increase human access or predation or competition from domestic animals, pests or exotic species to levels that would adversely affect sensitive species.
- J. The project would impact nesting success of the following sensitive animals through grading, clearing, fire fuel modification, and/or other noise generating activities such as construction. Alteration of habitat during breeding seasons could only be considered less than significant if a biologically-based determination can be made that the project would not have a measured adverse effect on the regional long-term survival of the specified species:<sup>17</sup>

<i>Species*</i>	<i>Breeding Season</i>
<i>Coastal cactus wren</i>	<i>February 15 to August 15</i>
<i>Coastal California gnatcatcher*</i>	<i>February 15 to August 31</i>
<i>Least Bell's vireo</i>	<i>March 15 to September 15</i>
<i>Southwestern willow flycatcher</i>	<i>May 1 to September 1</i>
<i>Tree-nesting raptors</i>	<i>January 15 to July 15</i>
<i>Ground-nesting raptors</i>	<i>February 1 to July 15</i>
<i>Golden eagle</i>	<i>January 1 to July 31</i>
<i>Light-footed clapper rail**</i>	<i>February 15 to September 30</i>

*\*The breeding seasons listed in this table do not supersede implementing agreements with the wildlife agencies, Habitat Conservation Plans (HCPs), Habitat/Resource Management Plans (HMPs/RMPs), and Special Area Management Plans (SAMPs). For example, inside the MSCP Subarea Plan, the gnatcatcher breeding season is March 1 to August 15.*

*\*\* The light-footed clapper rail is a CDFG fully-protected species and the CDFG does not allow "take" under the Fish and Game Code.*

## 4.2 Riparian Habitat or Sensitive Natural Community

**Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

The following information should be evaluated to provide evidence to support a conclusion of impact significance.

- A. Project-related construction, grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in Table 5, excluding those without a mitigation ratio) on or off the project site. This Guideline would not apply to small remnant pockets of habitat

<sup>17</sup> Significance guideline 4.1.J. This guideline addresses the potential loss of offspring for particularly sensitive birds. Any direct or indirect impacts that might affect the nesting success of these species would be significant. The dates used are based on the collective information gathered from various studies completed on the birds of San Diego County.

that have a demonstrated limited biological value. No *de minimus* standard is specified under which an impact would not be significant, however; minor impacts to native or naturalized habitat that is providing essentially no biological habitat or wildlife value can be evaluated on a case-by-case basis to determine whether the projected impact may be less than significant. For example, an impact to native or naturalized upland habitat under 0.1 acre in an existing urban setting may be considered less than significant (depending on a number of factors). An evaluation of this type should consider factors including, but not limited to, type of habitat, relative presence of habitat type in project vicinity, its condition and size, presence or potential for sensitive species, relative connectivity with other native habitat, wildlife species and activity in project vicinity, and current degree of urbanization and edge effects in project vicinity, etc. Just because a particular habitat area is isolated, for example, does not necessarily mean that impacts to the area would not be significant (e.g. vernal pools). An area that is disturbed or partially developed may provide a habitat “island” that would serve as a functional refuge area “stepping stone” or “archipelago” for migratory species.

- B. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by ACOE, CDFG and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity and abundance.
- C. The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historical low groundwater levels.<sup>18</sup>
- D. The project would increase human access or competition from domestic animals, pests or exotic species to levels proven to adversely affect sensitive habitats.<sup>2</sup>
- E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands. Generally, the County considers that buffers of a minimum of 25 feet and a maximum of 200 feet are necessary to protect wetlands.<sup>19</sup> Buffers of less than 25 feet could only be considered less than significant if a biologically-based determination can be made that the reduced buffer would not have a substantially adverse effect on the functions and values of the wetlands.

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<sup>18</sup> Significance guideline 4.2.C. Studies have found that groundwater reductions adversely affect native plant species. Two of the referenced studies (Integrated Urban Forestry, 2001 and Committee on Riparian Zone Functioning and Strategies for Management et. al, 2002) found that permanent reduction in groundwater elevation levels of greater than three feet is enough to induce water stress in some riparian trees, particularly willow (*Salix* spp.), cottonwood (*Populus* spp.) and *Baccharis* species.

<sup>19</sup> Significance guideline 4.2.E. Wetland crossings by their nature will not have a wetland buffer.

The following examples provide guidance on determining appropriate buffer widths.<sup>20</sup>

- A 25-foot wetland buffer would only be appropriate under a situation such as the following: The wetland has been assessed to have low physical and chemical functions, vegetation is not dominated by hydrophytes, soils are not highly erosive, slopes do not exceed 25%, and the wetland is not essential or integral in maintenance of local ecological values.
- A wetland buffer of 50-100 feet would be appropriate for moderate to high quality wetlands which support a predominance of hydrophytic vegetation or wetlands within steep slope areas (greater than 25%) with highly erosive soils. Within the 50-100-foot range, wider buffers are appropriate where wetlands connect upstream and downstream, where the wetlands serve as a local wildlife corridor, or where the adjacent land use(s) would result in substantial edge effects that could not be mitigated.
- Wetland buffers of greater than 100 feet to 200 feet or more are appropriate for wetlands within regional wildlife corridors or wetlands that support significant populations of wetland-associated sensitive species or where stream meander, erosion, or other physical factors indicate a wider buffer is necessary to preserve wildlife habitat.
- Buffering of greater than 200 feet may be necessary when a wetland is within a regional corridor or supports significant populations of wetland-associated sensitive species and lies adjacent to land use(s) which could result in a high degree of edge effects within the buffer.

### **4.3 Federal Wetlands**

**Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?**

This Guideline refers only to federally protected wetlands. The significance of impacts shall be determined under Guideline 4.2.B, C, and E.

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<sup>20</sup> Significance guidelines 4.2.E, 4.5 C. The Resource Protection Ordinance substantially limits activities that may occur in wetlands and wetland buffers as defined by the Ordinance. The Ordinance requires wetland buffers of an appropriate size to protect the wetlands environmental and functional habitat values. The Ordinance prohibits impacts to sensitive habitat lands, although it allows development within sensitive habitat lands when the project includes mitigation that provides an equal or greater benefit to the affected species.

#### **4.4 Wildlife Movement and Nursery Sites**

**Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

The following information should be evaluated to provide evidence to support a conclusion of impact significance.

- A. The project would prevent wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.
- B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage. For example, if the project proposes roads that cross corridors, fencing that channels wildlife to underpasses located away from interchanges will be required to provide connectivity. Wildlife underpasses shall have dimensions (length, width, height) suitable for passage by the affected species based on a site-specific analysis of wildlife movement.<sup>8</sup>
- C. The project would create artificial wildlife corridors that do not follow natural movement patterns. For example, constraining a corridor for mule deer or mountain lion to an area that is not well-vegetated or that runs along the face of a steep slope instead of through the valley or along the ridgeline.<sup>8</sup>
- D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.<sup>21</sup>
- E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path. The adequacy of the width shall be based on the biological information for the target species, the quality of the habitat within and adjacent to the corridor, topography and adjacent land uses. Where there is limited topographic relief, the corridor should be well-vegetated and adequately buffered from adjacent development. Corridors for bobcats, deer and other large animals should reach rim-to-rim along drainages.<sup>8</sup>

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<sup>21</sup> Significance guidelines 4.4.B, 4.4.C, 4.4.D, 4.4.E, 4.4.F. Wildlife movement paths have a critical role in species survival, allowing foraging, juvenile dispersal, genetic flow, migration and colonization. Without these ecological processes, the probability of species extirpation and eventually extinction is significantly greater. Because of their importance, movement paths have received substantial attention in conservation biology literature. Unfortunately, no study has or can conclude the universal minimum standards for maintaining a movement path because of inherent variability in biological resources. Instead, the optimal conditions for individual movement paths is be based on site-specific factors, such as the function of the movement path (i.e., as either a regional linkage or a local movement corridor), the needs of the specific species that utilize the path and the type and quality of habitat present. The criterion set forth in these guidelines relies on site-specific factors while following the guiding principles that have been established through the numerous studies on wildlife movement paths.

- F. The project does not maintain adequate visual continuity (i.e., long lines-of-site) within wildlife corridors or linkage. For example, development (such as homes or structures) sited along the rim of a corridor could present a visual barrier to wildlife movement. For stepping-stone/archipelago corridors, a project does not maintain visual continuity between habitat patches.<sup>8</sup>

#### **4.5 Local Policies, Ordinances, Adopted Plans**

**Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?**

The following information should be evaluated to provide evidence to support a conclusion of impact significance.

- A. For lands outside of the MSCP, the project would impact coastal sage scrub (CSS) vegetation in excess of the County's 5% habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.<sup>22</sup>
- B. The project would preclude or prevent the preparation of the subregional Natural Communities Conservation Planning Process (NCCP). For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.<sup>9</sup>
- C. The project will impact any amount of sensitive habitat lands as outlined in the Resource Protection Ordinance (RPO).<sup>7</sup>
- D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the Natural Communities Conservation Planning Process (NCCP) Guidelines.<sup>9</sup>
- E. The project does not conform to the goals and requirements as outlined in any applicable Habitat Conservation Plan (HCP), Habitat Management Plan (HMP), Special Area Management Plan (SAMP), Watershed Plan, or similar regional planning effort.
- F. For lands within the Multiple Species Conservation Program (MSCP), the project would not minimize impacts to Biological Resource Core Areas (BRCAs), as defined in the Biological Mitigation Ordinance (BMO).<sup>23</sup>
- G. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.<sup>9</sup>

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<sup>22</sup> Significance guidelines 4.5.A, 4.5.B, 4.5.D, 4.5.G, 4.5.J. Projects must conform to the specific requirements of the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines and the San Diego County Habitat Loss Permit (HLP) Ordinance. These guidelines relate to specific findings required for all projects outside of the MSCP boundaries.

<sup>23</sup> Significance guidelines 4.5.F, 4.5.H, 4.5.I. Projects must conform to the specific requirements of the Multiple Species Conservation Program (MSCP) and the Biological Mitigation Ordinance (BMO). These guidelines relate to specific findings required for all projects within the MSCP boundaries.

- H. The project does not maintain existing movement corridors and/or habitat linkages as defined by the Biological Mitigation Ordinance (BMO).<sup>10</sup>
- I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.<sup>10</sup>
- J. The project would reduce the likelihood of survival and recovery of listed species in the wild.<sup>9</sup>
- K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (Migratory Bird Treaty Act).
- L. The project would result in the take of eagles, eagle eggs or any part of an eagle (Bald and Golden Eagle Protection Act).

#### **4.6 Cumulative Impacts**

**Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal species?**

**Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?**

The whole of the proposed action must be evaluated to determine if there will be significant cumulative impacts. Cumulative issues to consider include the applicability of a regional plan (such as MSCP and NCCP) and a list of past, present and future projects in the area. If relying on a project’s conformance with a regulatory program or existing mitigation plan such as an HCP or NCCP as evidence that cumulative impacts will be less than significant, additional language should be included to substantiate the decision that the project has no cumulatively considerable impacts beyond the existence of the HCP or NCCP.

## **5.0 STANDARD MITIGATION MEASURES AND PROJECT DESIGN CONSIDERATIONS**

When it has been established that a significant impact will potentially occur, the project must propose mitigation to lessen or compensate for the impact. As defined by CEQA (Section 15370), mitigation includes either measures to avoid, minimize or rectify impacts or measures that compensate for impacts by adequately replacing or providing substitute resources. Table 1 provides a grouping of some applicable mitigation measures that can be utilized to address the Significance Guidelines.

Project design is critically important for the protection of biological resources. Unless projects are designed appropriately, resources cannot be protected in a manner that will ensure long-term viability. Detailed discussion regarding project design is included in Attachment B.

**Table 1**

**Typical Mitigation Measures and Conditions**

<b>Typical Mitigation Applied to Reduce Effects Below Significance</b>
Biological Open Space/Conservation Easement or Fee Title Transfer of Open Space
Limited Building Zone Easement
Off-site Purchase or Preservation of Habitat
Revegetation Plans
Salvage of Root Stock, Seed or Specimen Collection
Revegetation and/or enhancement of Open Space
Resource Management Plans (RMP) ( <i>formerly known as Habitat Management Plans or HMPs</i> )
Breeding Season Avoidance
Permanent Signs
Permanent Fencing or Walls
Temporary Fencing
Evidence of Federal or State permits
Restrictions on Lighting, Runoff, Access, and/or Noise
Biological Monitoring

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## Attachment A

### DEFINITIONS

Core Wildlife Area. A large block of habitat that supports a source population of a sensitive wildlife species or multiple wildlife species. Core wildlife areas are typically 500 acres or more (not limited to project boundaries), though smaller areas with particularly valuable resources may also be considered a core wildlife area.

Corridor. A specific route that is used for movement and migration of species. A corridor may be different from a "Linkage" because it represents a smaller or more narrow avenue for movement.

Impact Neutral. An area not considered impacted, but cannot be credited toward mitigation requirements. For example, wetlands and wetland buffers that are avoided to comply with the Resource Protection Ordinance are impact neutral. Large lot subdivisions may designate impact neutral areas as described in the Biological Report Format, section 4.2, Analysis of Project Effects.

Linkage. An area of land which supports or contributes to the long-term movement of wildlife and genetic exchange by providing live-in habitat that connects to other habitat areas.

Narrow Endemic Species. As defined in the Biological Mitigation Ordinance, those plant species listed on Attachment E of document No. 0769999 on file with the Clerk of the Board.

Native Wildlife Nursery Sites. Sites where wildlife concentrate for hatching and/or raising young, such as rookeries, spawning areas and bat colonies.

Population. An interbreeding group of individuals of the same species. The geographical limits of a population should be delineated as most appropriate for that species depending on its mobility, method of reproduction, and known distribution. Proportions of a population shall generally be determined based on the number of individuals; however, area may be appropriate for some species.

Raptor. Birds of prey such as eagles, hawks, falcons and owls.

Raptor Foraging Habitat. Land that is a minimum of 5 acres (not limited to project boundaries) of fallow or open areas with any evidence of foraging potential (i.e., burrows, raptor nests, etc.).

Sensitive Habitat. Land which supports unique vegetation communities, or the habitats of rare or endangered species or sub-species of animals or plants as defined by Section 15380 of the State California Environmental Quality Act (CEQA) Guidelines (14 Cal. Admin. Code Section 15000 et seq.). Sensitive Habitat includes the area which is

necessary to support a viable population of any of the above species in perpetuity, or which is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning wildlife corridor.

Sensitive Plant. Those plants which meet the following criteria as determined by the County and maintained in its list of Sensitive Plant Species:

- Group A = Plants that are rare, threatened or endangered in California and elsewhere; or
- Group B = Plants that are rare, threatened or endangered in California but more common elsewhere; or
- Group C = Plants which may be quite rare, but need more information to determine their true rarity status; or
- Group D = Plants of limited distribution and are uncommon, but not presently rare or endangered.

Sensitive Species.

- Those species that are included on generally accepted and documented lists of plants and animals of Endangered, threatened, candidate or of special concern by the Federal Government or State of California;
- MSCP Rare, Narrow Endemic Animal Species, Narrow Endemic Plant Species, and County Sensitive Plant and Animal Species.
- Those species that meet the definition of "Rare or Endangered Species" under Section 15380 of the State CEQA Guidelines.

## Attachment B

### PROJECT DESIGN CONSIDERATIONS

Project design is critically important for the protection of biological resources. Unless projects are designed appropriately, resources cannot be protected in a manner that will ensure long-term viability. Therefore, the type and location of projects should always be designed with the needs of biological resources in mind.

The project should first be reviewed to determine whether on-site open space is needed. **On-site open space should only be included in one of the following instances:**

- **A site hosts *high to very high* value or irreplaceable biological resources; or**
- **A site hosts *moderate* value biological resources and site-specific factors dictate that on-site mitigation would be biologically-viable; or**
- **A site hosts *low* value habitat but is part of a larger habitat complex that is biologically-viable.**

Sites that do not meet the examples above shall provide any necessary mitigation off-site.

If it is determined that on-site open space should be included, the optimal size, shape and location of open space should become a primary consideration when designing a project.

To determine the value of a site's biological resources, the following attributes should be considered:

- The sensitivity of the vegetation type;
- Extent of on and off-site habitat connectivity;
- General quality of the habitat as determined by the level of disturbance, range in vegetative structure and species diversity;
- Sensitivity of species present;
- Importance of its biological function, such as being part of a wildlife corridor, functioning as a buffer or being integral to a watershed;
- Physical characteristics, such as topography and soils.
- Whether the site has been identified as or adjacent to a pre-approved mitigation area (PAMA) or proposed PAMA.

## Basic Principles

The following basic principles should be followed when designing a project that includes on-site open space:

- ❖ In all cases, projects should be designed to minimize impacts to the more sensitive resources and completely avoid and buffer those that are very rare or unique.
- ❖ Although the overall size of an open space area is important, long-term viability of the resources depends on other factors as well. Site conditions and project-specific details should be considered, including:
  - The function and value of the habitat (i.e., as a remnant for stepping-stone / archipelago-dependent behavior, etc.);
  - The type of habitat present and any design requirements (i.e., a vernal pool has a watershed, oak woodlands and wetlands need a buffer to protect their root systems, etc.);
  - Whether wildlife utilize portions of the site for movement (on any scale);
  - The types of species utilizing the site for nesting, foraging, movement, etc;
  - The nature and scale of the project proposed (for instance, an industrial project will require far different considerations than a subdivision with 20-acre lots);
  - Fire fuel modification and vegetation management requirements for existing and proposed structures and roads.
- ❖ Large blocks of habitat are generally better than smaller ones. However, when no alternative exists, there are cases when a small patch of habitat is useful as a stepping-stone through a developed landscape; although, this is only functional for a limited number of avian species.
- ❖ The shape of open space in relation to development is often as important as size. The intent of any project design should be to create the maximum amount of interior open space with the lowest amount of interface between development and preserved areas – referred to as maximizing the surface area to perimeter ratio. Less perimeter translates to less potential for “edge effects” to degrade the open space.
- ❖ The shape, size and location of open space should all be planned to create the maximum amount of habitat connectivity between on and off-site areas. Habitat connectivity allows for more wildlife movement and maximizes the amount of resources available to resident wildlife (for nesting, foraging, etc.).
- ❖ To maintain the ecosystem as a functioning unit, the open space should be located such that it encompasses the natural diversity of type, function and structure of habitats. Natural patterns of habitat associations should also be preserved. For instance, wetlands and their adjacent upland habitats should be preserved together as should the grasslands or low-lying shrublands adjacent to oak woodland.

- ❖ Linkages and corridors are essential for juvenile dispersal, foraging, migration and genetic exchange, all of which are necessary for maintaining healthy populations. The optimal location and dimensions of each linkage and corridor are dependent upon the types of resources present and the specific needs of species that utilize the movement path. Natural movement paths within a larger block of undisturbed habitat should be protected, as should the existing constrained, sometimes tenuous connections that provide the last link between two patches of habitat. Projects should never propose to create a constricted corridor or further constrain an existing one.
- ❖ Preserve design may include land subject to past disturbances if the land in its current or restored state would serve a biological function.

Table 2

County of San Diego Sensitive Plant List

**LIST A** (Plants rare, threatened or endangered in California and elsewhere)

*Abronia villosa* var. *aurita*, Foothill sand-verbena -- chaparral and CSS, sandy

*Acanthomintha ilicifolia*, San Diego thornmint [FT][CE][MSCP narrow endemic] -- vernal pools, grassy areas, chaparral and CSS, clay and gabbro soils

*Ambrosia pumila*, San Diego ambrosia [FE][MSCP narrow endemic] -- chaparral, CSS, grasslands, and valley bottoms, often in disturbed areas

*Aphanisma blitoides*, Aphanisma -- coastal bluffs, scrub, and dunes

*Arctostaphylos glandulosa* ssp. *crassifolia*, Del Mar manzanita [FE] -- maritime chaparral, sandy

*Arctostaphylos otayensis*, Otay manzanita -- mixed chaparral on gabbro and metavolcanic rock

*Arctostaphylos rainbowensis*, Rainbow manzanita -- chaparral, north county inland areas

*Astragalus deanei*, Dean's milkvetch -- CSS and riparian along Sweetwater, Otay and Tijuana Rivers and tributaries

*Astragalus douglasii* var. *perstrictus*, Jacumba milkvetch -- desert transition in southern part of County

*Astragalus magdalenae* var. *peirsonii*, Pierson's milkvetch [FE][CE] -- desert dunes

*Astragalus oocarpus*, San Diego Milkvetch -- Lower mountain slopes

*Astragalus pachypus* var. *jaegeri*, Jaeger's astragalus -- Near Riverside County border, chaparral, cismontane woodlands, CSS, grasslands, sandy or rocky

*Astragalus tener* var. *titi*, Coastal dunes milkvetch [CE] -- coastal strand

*Atriplex coulteri*, Coulter's saltbush -- coastal mesas and Ramona grasslands

*Atriplex pacifica*, South coast saltbush -- coastal sandy areas

*Atriplex parishii*, Parish brittlescale -- coastal areas and Ramona grasslands

*Atriplex serenana* var.  *davidsonii*, Davidson's saltscale -- coastal areas

*Baccharis vanessae*, Encinitas baccharis [FT][CE][MSCP narrow endemic] -- coastal mixed chaparral, central coast & foothills

*Berberis nevinii*, Nevin's barberry [FE][CE][MSCP narrow endemic] -- mixed chaparral near Riverside County border, also cismontane woodland, CSS, and riparian scrub, sandy or gravelly

*Boechera hirschbergiae* (= *Arabis h.*), Hirshberg's rockcress -- endemic, east of Cuyamaca Lake, on heavy clay overlaid with pebbles

*Brodiaea filifolia*, Thread-leaved brodiaea [FT][CE][MSCP narrow endemic] -- clay soils and near vernal pools, North County

*Brodiaea orcuttii*, Orcutt's brodiaea -- vernal pools and foothill springs

*Calochortus dunnii*, Dunn's mariposa lily [CA rare][MSCP narrow endemic] -- montane and foothill, gabbro and metavolcanic soils

*Ceanothus cyaneus*, Lakeside ceanothus [MSCP narrow endemic] -- Lakeside, Crest, Alpine chaparral

*Centromedia (Hemizonia) pungens* ssp. *laevis*, Smooth tarplant -- Fall-flowering in coastal valley bottoms

*Centromedia (Hemizonia) parryi* ssp. *australis*, Southern tarplant -- Fall-flowering in coastal and interior valley bottoms including Ramona

*Chaenactis carphoclina* var. *peirsonii*, Peirson's pincushion flower -- desert slopes near Santa Rosa Mountains

*Chaenactis glabriuscula* var. *orcuttiana*, Orcutt's pincushion -- coastal bluffs and dunes

*Chaenactis parishii*, Parish's pincushion flower -- peak tops in the mountains, chaparral, rocky

*Chamaesyce platysperma*, Flat-seeded spurge -- sandy desert scrub

*Chorizanthe orcuttiana*, Orcutt's chorizanthe [FE][CE] -- sand soils; Point Loma and Encinitas, older records at Torrey Pines State Park

*Chorizanthe parryi* var. *fernandina*, San Fernando spineflower -- north coastal valleys (old record may have been misidentified)

*Chorizanthe polygonoides* var. *longispina*, Long-spined spineflower -- clay soils; scattered distribution

*Clarkia delicata*, Campo clarkia -- central and southern oak woodlands, chaparral

*Comarostaphylos diversifolia* ssp. *diversifolia*, Summer holly -- coastal and foothill canyons in heavy chaparral  
*Cordylanthus maritimus* ssp. *maritimus*, Salt marsh bird's beak [FE][CE] -- coastal salt marsh  
*Corethrogyne* (*Lessingia*) *filaginifolia* var. *linifolia*, San Dieguito sand aster -- north coastal sandy areas  
*Corethrogyne filaginifolia* (= *Lessingia* f.), San Diego sand aster -- coastal sandy areas  
*Cryptantha ganderi*, Gander's cryptantha -- desert dunes  
*Cupressus forbesii*, Tecate cypress -- Otay, Tecate, and Guatay Mountains  
*Cupressus stephensonii*, Cuyamaca cypress -- west slope of Cuyamaca Peak  
*Deinandra* (*Hemizonia*) *conjugens*, Otay tarplant [FT][CE][MSCP narrow endemic] -- grasslands near Otay and Bonita  
*Deinandra* (*Hemizonia*) *floribunda*, Tecate tarplant -- Fall-flowering in valleys and arroyos in interior, southern chaparral  
*Deinandra* (*Hemizonia*) *mohavensis*, Mojave tarplant [CE] -- drainages in 3,000 ft. elevation chaparral, Chihuahua Valley, Palomar Mtn.  
*Delphinium hesperium* ssp. *cuyamacae*, Cuyamaca larkspur [CA rare] -- montane meadows  
*Downingia concolor* var. *brevior*, Cuyamaca downingia [CE] -- Cuyamaca Lake  
*Dudleya blochmaniae* var. *blochmaniae*, Blochman's dudleya -- MCAS Camp Pendleton clay soils and terraces  
*Dudleya blochmaniae* var. *brevifolia*, Short-leaved dudleya [CE][MSCP narrow endemic] -- sandstone terraces near Torrey Pines and Del Mar  
*Dudleya multicaulis*, Many-stemmed dudleya -- MCAS Camp Pendleton  
*Dudleya variegata*, Variegated dudleya [MSCP narrow endemic] -- coastal mesas, CSS and grasslands on foothill slopes among rocks, especially metavolcanics  
*Dudleya viscida*, Sticky dudleya -- North County coastal canyon slopes  
*Ericameria cuneata* var. *macrocephala*, Laguna Mountain goldenbush -- rocky mountain peaks  
*Eriogonum foliosum*, Leafy buckwheat -- sandy montane desert soils  
*Eryngium aristulatum* var. *parishii*, San Diego button-celery [FE][CE] -- vernal pools  
*Eryngium pendletonensis*, Pendleton button-celery -- MCAS Camp Pendleton; coastal bluffs, grasslands and sparse CSS  
*Fremontodendron mexicanum*, Mexican flannelbush [FE][CA rare] -- metavolcanic canyons on Otay and Jamul Mountains  
*Galium angustifolium borregoense*, Borrego bedstraw [CA rare] -- Palm Canyon  
*Galium angustifolium* ssp. *jacinticum*, San Jacinto Mountains bedstraw -- montane areas  
*Grindelia hirsutula hallii*, Hall's gumplant -- montane grassy and meadow areas  
*Hazardia orcuttii*, Orcutt's hazardia [CT] -- CSS in Encinitas  
*Heuchera brevistaminea*, Mt. Laguna alumroot -- rocky mountain cliff slopes  
*Horkelia cuneata* ssp. *puberula*, Mesa horkelia -- chaparral, CSS, cismontane woodland, sandy, gravelly  
*Horkelia truncata*, Ramona horkelia -- gabbro and metavolcanic foothill slopes and peaks  
*Hulsea californica*, San Diego sunflower -- chaparral slopes in montane areas  
*Isocoma menziesii* var. *decumbens*, Decumbent goldenbush -- CSS  
*Lasthenia glabrata* ssp. *coulteri*, Coulter's goldfields -- coastal saltmarsh  
*Lepechinia ganderi*, Gander's pitcher sage [MSCP narrow endemic] -- metavolcanic soils, Otay and San Miguel Mountains  
*Lepechinia cardiophylla*, Heart-leaved pitcher sage [MSCP narrow endemic] -- metavolcanic soils near Mt. Woodson  
*Lepidium flavum* var. *felipense*, Borrego pepper-grass -- dry lake bottom, Little Blaire Valley  
*Lepidium virginicum* var. *robinsonii*, Robinson pepper-grass -- CSS and grassy areas  
*Lessingia glandulifera* var. *tomentosa*, Warner Springs lessingia -- valleys near Warner Springs; chaparral, sandy  
*Lilium parryi*, Lemon lily -- moist montane meadows  
*Limnanthes gracilis* ssp. *parishii*, Cuyamaca meadowfoam [CE] -- montane meadows  
*Linanthus floribundus* ssp. *hallii*, Santa Rosa Mtn. linanthus -- Santa Rosa Mountains  
*Linanthus orcuttii*, Orcutt's linanthus -- montane forest openings  
*Lotus crassifolius* var. *otayensis*, Otay Mountain lotus -- top of Otay Mountain  
*Lotus haydonii*, Pygmy lotus -- desert canyons, pinyon juniper, rocky

*Lotus nuttallianus*, Nuttall's lotus -- south coastal strand and sandy soils  
*Lupinus excubitus* var. *medius*, Mtn. Springs bush lupine -- eastern edge of County near I-8  
*Malacothamnus aboriginum*, Indian Valley bush mallow -- montane chaparral  
*Mimulus latidens*, Vernal pool monkeyflower -- vernal pools  
*Monardella hypoleuca* ssp. *ilanata*, Felt-leaved rock mint -- southern foothill peak tops  
*Monardella macrantha* ssp. *hallii*, Hall's monardella -- montane forest  
*Monardella nana* ssp. *leptosiphon*, San Felipe monardella -- montane chaparral and conifer forest, near Riverside border  
*Monardella stoneae*, -- in canyons around Otay and Tecate Mountains  
*Monardella viminea* (= *M. linoides* ssp. *viminea*), Willowy monardella [FE][CE][MSCP narrow endemic] -- coastal canyons  
*Muilla clevelandii*, San Diego goldenstar -- coastal mesas and clay soils  
*Navarretia fossalis*, Spreading navarretia [FT] -- vernal pools  
*Navarretia peninsularis*, Peninsular navarretia -- moist montane areas near Cuyamaca Lake  
*Navarretia prostrata*, Prostrate navarretia -- vernal pools  
*Nemacaulis denudata* var. *denudata*, Coast woolly-heads -- sandy coastal areas  
*Nolina cismontana*, Chaparral beargrass -- Magee Ridge, Viejas Mtn.  
*Nolina interrata*, Dehesa beargrass [CE][MSCP narrow endemic] -- chaparral and CSS on gabbro soils in southern foothills  
*Opuntia parryi* var. *serpentina* (*Cylindropuntia californica*), Snake cholla [MSCP narrow endemic] -- south CSS  
*Orcuttia californica*, California Orcutt grass [FE][CE] -- large vernal pools in California  
*Packera ganderi* (= *Senecio g.*), Gander's butterweed [CA rare] -- gabbro soils in interior regions  
*Phacelia stellaris*, Brand's phacelia -- sandy soils near the coast  
*Pinus torreyana* ssp. *torreyana*, Torrey pine -- Coastal mixed chaparral at Del Mar (applies to naturally occurring trees)  
*Poa atropurpurea*, San Bernardino bluegrass [FE] -- montane meadows  
*Pogogyne abramsii*, San Diego mesa mint [FE][CE] -- vernal pools  
*Pogogyne nudiuscula*, Otay mesa mint [FE][CE] -- vernal pools in Otay Mesa  
*Quercus dumosa*, Nuttall's scrub oak -- maritime chaparral  
*Ribes canthariforme*, Morena currant -- moist areas in southern interior chaparral  
*Ribes viburnifolium*, Santa Catalina Island currant -- coastal canyons, chaparral, woodlands, Santa Catalina Island, Imperial Beach, and Baja California  
*Rorippa gambellii*, Gambel's watercress [FE][CT] -- montane streams, marshes, lake margins, Julian  
*Rubus glaucifolius* var. *ganderi*, Cuyamaca raspberry -- montane forest near Cuyamaca  
*Satureja chandleri*, San Miguel savory -- gabbro and metavolcanic soils in interior foothills, Jamul/Dulzura and Fallbrook areas  
*Scutellaria bolanderi* ssp. *austromontana*, Southern skullcap -- wet chaparral and montane areas  
*Sibaropsis hammittii*, Hammitt's claycress -- gabbro foothills, Viejas Mtn  
*Streptanthus campestris*, Southern jewelflower -- pinyon-juniper area  
*Stylocine citroleum*, Oil neststraw -- coastal areas, last collected in 1935  
*Suaeda esteroa*, Estuary seablite -- coastal salt marsh  
*Tetracoccus dioicus*, Parry's tetracoccus -- chaparral on gabbro and metavolcanic soils  
*Thermopsis californica* var. *semota*, Velvety false lupine -- montane meadows  
*Viguiera purissimae*, La Purissima viguiera -- found on MCAS Camp Pendleton, near Orange Co.  
*Xylorhiza orcuttii*, Orcutt's woody aster -- gypsum soils in desert canyons

#### **LIST B (Plants rare, threatened or endangered in California but more common elsewhere)**

*Adolphia californica*, San Diego adolphia -- clay soils in CSS, chaparral and grasslands  
*Agave shawii*, Shaw's agave [MSCP narrow endemic] -- coastal terraces  
*Ambrosia chenopodiifolia*, San Diego bur-sage -- CSS around Otay  
*Astragalus insularis* var. *harwoodii*, Harwood's milkvetch -- desert dunes at eastern base of mountains, sandy or gravely  
*Ayenia compacta*, Ayenia -- desert canyons

*Bergerocactus emoryi*, Golden snake cactus -- coastal bluff and near Otay Mountain in maritime succulent scrub  
*Bursera microphylla*, Elephant tree -- desert slopes  
*Calliandra eriophylla*, Fairy duster -- desert canyons, sandy or rocky  
*Carlownrightia arizonica*, Arizona carlowrightia -- desert scrub, sandy, granitic alluvium  
*Ceanothus verrucosus*, Wart-stemmed ceanothus -- coastal mixed chaparral  
*Chamaesyce arizonica*, Arizona spurge -- sandy desert scrub  
*Colubrina californica*, Las Animas colubrina -- high desert scrub  
*Cordylanthus orcuttianus*, Orcutt's bird's-beak -- CSS in South County near Otay, Chula Vista and Imperial Beach  
*Coreopsis maritima*, Sea dahlia -- coastal bluff  
*Dudleya attenuata* ssp. *orcuttii*, Orcutt's dudleya -- Border Field State Park  
*Ericameria palmeri* ssp. *palmeri*, Palmer's goldenbush [MSCP narrow endemic] -- south coastal and interior arroyos, mesic  
*Erodium macrophyllum*, Large-leaf fillary -- cismontane woodland, grasslands  
*Eucnide rupestris*, Rock nettle -- desert canyons and cliff bottoms  
*Euphorbia misera*, Cliff spurge -- coastal bluff  
*Ferocactus viridescens*, Coast barrel cactus -- coastal mesas and hillsides  
*Frankenia palmeri*, Palmer's frankenia/yerba reuma -- salt marsh near South Bay  
*Geraea viscida*, Sticky geraea -- southern foothill and desert transition, chaparral, often in disturbed areas  
*Herissantia crispa*, Curly herissantia -- eastern desert slopes  
*Heuchera rubescens* var. *versicolor*, San Diego County alumroot -- rocky mountain cliff slopes, conifer forest, chaparral, Hot Springs & Palomar Mts.  
*Hulsea mexicana*, Mexican hulsea -- desert mountain areas near Jacumba  
*Ipomopsis tenuifolia*, Slender-leaved ipomopsis -- desert transition in SE part of County  
*Iva hayesiana*, San Diego marsh-elder -- south coastal arroyos and ravines  
*Lewisia brachycalyx*, Southwestern bitterroot -- near Cuyamaca Lake, conifer forests and meadows/seeps  
*Linanthus bellus*, Desert beauty -- interior and desert transition chaparral in southern edge of County, sandy  
*Lycium parishii*, Parish's desert-thorn -- low desert flats  
*Machaeranthera asteroides* var. *lagunensis*, Laguna Mountain aster [CA rare] -- meadows and openings in forest on Mt. Laguna  
*Malperia tenuis*, Brown turbins -- desert pavement  
*Matelea parvifolia*, Climbing spearleaf -- desert washes and canyons  
*Mentzelia hirsutissima*, Hairy stickleaf -- sandy soil, low desert  
*Nama stenocarpum*, Mud nama -- muddy, lake edges  
*Nemacaulis denudata* var. *gracilis*, Slender woolly-heads -- sandy desert areas and coastal dunes  
*Ornithostaphylos oppositifolia*, Palo blanco -- hills south of Tijuana River valley  
*Quercus cedrosensis*, Cedros Island oak -- south slope of Otay Mountain  
*Rhus trilobata* var. *simplicifolia*, Single-leaf basketbush -- pinyon juniper, Pinyon and Vallecito Mts.  
*Rosa minutifolia*, Small-leaved rose [CA rare] -- Otay Mesa, CSS/chaparral,  
*Salvia munzii*, Munz's sage -- southern CSS/chaparral near Otay Mountain and Otay Mesa, also Dictionary Hill and Jamul Mts.  
*Selaginella eremophila*, Desert spike-moss -- desert slopes, gravelly/rocky  
*Senecio aphanactis*, Rayless ragwort -- coastal scrub, chaparral, woodlands, alkaline  
*Senna covesii*, Cove's cassia -- desert valley edges  
*Spermolepis echinata*, Spermolepis -- Borrego Valley, sandy or rocky  
*Stemodia durantifolia*, Blue streamwort -- mesic, sandy areas  
*Viola aurea*, Golden violet -- pinyon-juniper areas, sandy

**LIST C (Plants which may be quite rare, but need more information to determine their true rarity status)**

*Berberis fremontii*, Fremont barberry -- interior chaparral, pinyon-juniper woodland, rocky  
*Camissonia lewisii*, Lewis's sun cup -- CSS (?), grasslands, cismontane woodlands, coastal areas, sandy or clay  
*Ditaxis serrata* var. *californica*, California ditaxis -- desert scrub  
*Dudleya alainiae*, Reiser's dudleya -- rocky leeward slopes of mountains  
*Githopsis diffusa* ssp. *filicaulis*, Mission Canyon bluecup -- CSS in Mission Valley, but also in Silverwood Wildlife Sanctuary  
*Hordeum intercedens*, Vernal barley -- seeps and vernal pools  
*Myosurus minimus* (apus), Little mousetail -- vernal pools  
*Opuntia wigginsii* (*Cylindropuntia*), Wiggins cholla -- low desert, eastern edge of County, sandy

**LIST D (Plants of limited distribution and are uncommon, but not presently rare or endangered)**

*Abronia maritima*, Red sand-verbena -- sandy beach areas  
*Achnatherum diegoense*, San Diego needlegrass -- clay soils in native grassy areas, chaparral and CSS, rocky, often mesic  
*Androsace elongata* ssp. *acuta*, California androsace -- montane grassy slopes  
*Artemisia palmeri*, Palmer's sage -- arroyo bottoms in chaparral, CSS, and riparian, sandy, mostly south part of County  
*Asplenium vespertinum*, Western spleenwort -- chaparral, woodland, CSS, rocky  
*Astragalus crotalariae*, Salton milkvetch -- desert transition  
*Astragalus lentiginosus* var. *borreganus*, Borrego milkvetch -- desert dunes  
*Azolla mexicana*, Mexican mosquito fern -- standing water on ponds  
*Calandrinia breweri*, Brewer's calandrinia -- burned areas  
*Calandrinia maritima*, Seaside calandrinia -- coastal bluff scrub, CSS, grassland, sandy areas  
*Calochortus catalinae*, Catalina mariposa lily -- coastal grasslands, cismontane woodland, CSS, chaparral  
*Caulanthus simulans*, Payson's jewelflower -- sandy, granitic locations in foothills and desert  
*Chamaebatia australis*, Southern mountain misery -- chaparral, gabbro and metavolcanic soils  
*Chamaesyce revoluta*, Thread-stemmed spurge -- Mojave Desert scrub, rocky  
*Chorizanthe leptotheca*, Peninsular spineflower -- CSS and chaparral  
*Convolvulus simulans*, Small-flowered morning glory -- coastal clay areas and serpentine seeps, chaparral, CSS, grasslands  
*Cryptantha costata*, Ribbed cryptantha -- desert sandy soils  
*Cryptantha holoptera*, Winged cryptantha -- desert gravels  
*Cynanchum utahense*, Utah vine milkweed -- desert bajadas  
*Deinandra* (*Hemizonia*) *paniculata*, Paniculate tarplant -- grassy areas, coast & foothills, Bonsall to Otay  
*Delphinium parishii* ssp. *subglobosum*, Desert larkspur -- desert transition and rocky locations  
*Dichondra occidentalis*, Western dichondra -- coastal mixed chaparral and North County CSS, grasslands, woodlands  
*Fritillaria biflora*, Chocolate lily -- grasslands, usually on clay soils  
*Galium johnstonii*, Johnston's bedstraw -- Palomar Mtn.  
*Gilia caruifolia*, Caraway-leaved gilia -- east slopes of Palomar Mtn.  
*Harpagonella palmeri*, Palmer's grappling hook -- CSS in South County, chaparral, grassland, clay  
*Heterotheca sessiliflora* ssp. *sanjacintensis*, San Jacinto golden-aster -- North Mtn Ecoregion, mixed chaparral and mixed conifer  
*Holocarpha virgata elongata*, Graceful tarplant -- coastal mesas and foothills  
*Horsfordia newberryi*, Newberry's velvet-mallow -- Sonoran Desert scrub  
*Hulsea vestita callicarpha*, Beautiful hulsea -- chaparral and coniferous forest  
*Hymenothrix wrightii*, Wright's hymenothrix -- lower mountain woodlands and conifer forests  
*Juglans californica*, California black walnut -- riparian areas near DeLuz  
*Juncus acutus* var. *leopoldii*, Southwestern spiny rush -- marshes, seeps and riparian areas  
*Juncus cooperi*, Cooper's rush -- desert alkaline areas  
*Lathyrus splendens*, Pride of California -- southern interior chaparral

*Lilium humboldtii* ssp. *ocellatum*, Ocellated Humboldt lily -- shaded montane canyons  
*Lycium californicum*, California box-thorn -- coastal bluffs and scrub  
*Lyrocarpa coulteri* var. *palmeri*, Palmer's lyrepod -- desert canyons  
*Machaeranthera juncea*, Rush-like bristleweed -- chaparral and CSS in South County  
*Microseris douglasii* var. *platycarpha*, Small-flowered microseris -- CSS and clay soils  
*Mimulus aridus*, Desert monkey flower -- desert transition  
*Mimulus clevelandii*, Cleveland's monkeyflower -- foothill and mountain peaks  
*Mimulus diffusus*, Palomar monkeyflower -- montane and coastal mixed chaparral  
*Mirabilis tenuiloba*, Slender-lobed four o'clock -- desert canyons  
*Mucronea californica*, California spineflower -- coastal sandy soils (also inland)  
*Ophioglossum californicum*, California adder's tongue fern -- vernal pools, coastal mesas, and coastal mixed chaparral, mesic  
*Opuntia wolfii* (*Cylindropuntia*), Wolf's cholla -- low desert scrub  
*Orobanche parishii* ssp. *brachyloba*, Short-lobed broomrape -- sandy bluffs  
*Pectocarya peninsularis*, Baja California bur-comb -- rare in Borrego Valley  
*Penstemon clevelandii* var. *connatus*, San Jacinto beardtongue -- rocky desert slopes and mountains  
*Penstemon thurberi*, Thurber's beardtongue -- pinyon juniper areas, chaparral  
*Pentachaeta aurea*, Golden-rayed pentachaeta -- woodlands, lower conifer forests, CSS, grasslands  
*Perideridia gairdneri* ssp. *gairdneri*, Gairdner's yampah -- moist coastal and montane areas  
*Pilostyles thurberi*, Thurber's pilostyles -- Carrizo Badlands Overlook, grows on *Psoralea emoryi*  
*Piperia cooperi*, Cooper's rein orchid -- chaparral, woodland, grassland, elev. 15-1585m  
*Piperia leptopetala*, Narrow-petaled rein orchid -- woodlands and conifer forests  
*Polygala cornuta* var. *fishiae*, Fish's milkwort -- foothill peaks (chaparral, woodlands, riparian) especially metavolcanic and gabbro  
*Proboscidea althaeifolia*, Desert unicorn-plant -- desert washes, sandy  
*Quercus engelmannii*, Engelmann oak -- interior valleys and slopes  
*Romneya coulteri*, Coulter's matilija poppy -- chaparral and CSS, often in burns  
*Rupertia rigida*, Parish psoralea -- montane forest near Cuyamaca  
*Salvia eremostachya*, Desert sage -- northern desert canyons, rocky/gravelly  
*Selaginella asprella*, Bluish spike-moss -- montane chaparral, granitic/rocky  
*Selaginella cinerascens*, Ashy spike-moss -- undisturbed CSS  
*Streptanthus bernardinus*, Laguna Mtns. Jewelflower -- montane peak tops  
*Suaeda taxifolia*, Woolly seablite -- margins of coastal salt marshes  
*Viguiera laciniata*, San Diego sunflower -- CSS in southern part of County

#### Key to abbreviations

FE – Federally Endangered  
 FT – Federally Threatened  
 CE – California Endangered  
 CT – California Threatened  
 CA rare – rare in California, but not listed  
 NE – MSCP Narrow Endemic  
 CSS – Coastal sage scrub

**Table 3**

**County of San Diego Sensitive Animal List**

**Group 1 Species**

<p><b><u>Invertebrates</u></b>  <i>Branchinecta sandiegoensis</i>, San Diego fairy shrimp  <i>Lindieriella occidentalis</i>, California lindellaria  <i>Streptocephalus woottoni</i>, Riverside fairy shrimp  <i>Euphydryas editha quino</i>, Quino checkerspot butterfly  <i>Papilio multicaldata</i>, Two-tailed swallowtail  <i>Apodemus mormo peninsularis</i>, Peninsular metalmark  <i>Mitoura thornei</i>, Thorne's hairstreak butterfly  <i>Lycaena hermes</i>, Hermes copper  <i>Plebejus saepiolis hilda</i>, Hilda blue  <i>Euphydryas vestris harbisoni</i>, Dun skipper  <i>Panoquina errans</i>, Wandering salt marsh skipper  <i>Pseudocopaeodes eunus eunus</i>, Alkali skipper  <i>Pyrgus ruralis lagunae</i>, Laguna Mountain skipper  <i>Coelus globosus</i>, Globose dune beetle</p> <p><b><u>Fish</u></b>  <i>Eucyclogobius newberryi</i>, Tidewater goby  <i>Gila orcutti</i>, Arroyo chub  <i>Oncorhynchus mykiss</i>, Rainbow Trout -- Steelhead form</p> <p><b><u>Reptiles and Amphibians</u></b>  <i>Batrachoseps aridus</i>, Desert slender salamander  <i>Ensatina eschscholtzii klauberi</i>, Large-blotched salamander  <i>Bufo microscaphus californicus</i>, Arroyo southwestern toad  <i>Rana aurora draytoni</i>, California red-legged frog  <i>Rana muscosa</i>, Mountain yellow-legged frog  <i>Clemmys marmorata pallida</i>, Southwestern pond turtle  <i>Coleonyx variegatus abbottii</i>, San Diego banded gecko  <i>Uma notata notata</i>, Colorado Desert fringe-toed lizard  <i>Phrynosoma mcallii</i>, Flat-tailed horned lizard  <i>Thamnophis hammondi</i>, Two-striped garter snake</p> <p><b><u>Birds</u></b>  <i>Aechmophorus occidentalis</i>, Western Grebe  <i>Plegadis chihi</i>, White-faced ibis  <i>Cathartes aura</i>, Turkey vulture  <i>Circus cyaneus hudsonius</i>, Northern harrier  <i>Elanus caeruleus</i>, White-tailed kite  <i>Accipiter striatus</i>, Sharp-shinned hawk  <i>Accipiter cooperi</i>, Cooper's hawk  <i>Buteo lineatus</i>, Red-shouldered hawk  <i>Buteo swainsoni</i>, Swainson's hawk (Winter)</p>	<p><i>Buteo regalis</i>, Ferruginous hawk (Winter)  <i>Aquila chrysaetos</i>, Golden eagle  <i>Haliaeetus leucocephalus</i>, Bald eagle (Winter)  <i>Pandion haliaetus</i>, Osprey (Rarely breeds)  <i>Falco mexicanus</i>, Prairie falcon  <i>Falco peregrinus anatum</i>, American peregrine falcon  <i>Rallus longirostris levipes</i>, Light-footed clapper rail  <i>Charadrius alexandrinus nivosus</i>, Western snowy plover  <i>Sterna elegans</i>, Elegant tern  <i>Sterna antillarum browni</i>, California least tern  <i>Rynchops niger</i>, Black skimmer  <i>Coccyzus americanus occidentalis</i>, Yellow-billed cuckoo  <i>Asio otus</i>, Long-eared owl  <i>Strix occidentalis occidentalis</i>, California spotted owl  <i>Athene cunicularia hypugea</i>, Burrowing owl  <i>Melanerpes lewis</i>, Lewis' woodpecker (Winter)  <i>Empidonax trailii extimus</i>, Southwestern willow flycatcher  <i>Pyrocephalus rubinus</i>, Vermilion flycatcher  <i>Lanius ludovicianus</i>, Loggerhead shrike  <i>Vireo vicinior</i>, Gray vireo  <i>Vireo bellii pusillus</i>, Least Bell's vireo  <i>Progne subis</i>, Purple Martin  <i>Riparia riparia</i>, Bank swallow (Formerly bred)  <i>Campylorhynchus brunnicapillus couesi</i>, San Diego cactus wren  <i>Poliophtila californica</i>, California gnatcatcher  <i>Toxostoma crissale</i>, Crissal thrasher (Mesquite riparian)  <i>Icteria virens</i>, Yellow-breasted chat  <i>Amphispiza belli belli</i>, Bell's sage sparrow  <i>Aimophila ruficeps canescens</i>, Rufous-crowned sparrow  <i>Ammodramus savannarum</i>, Grasshopper sparrow  <i>Passerculus sandwichensis beldingii</i>, Belding's savannah sparrow  <i>Agelaius tricolor</i>, Tricolored blackbird</p> <p><b><u>Mammals</u></b>  <i>Perognathus longimembris pacificus</i>, Pacific pocket mouse  <i>Dipodomys stephensi</i>, Stephens' kangaroo rat  <i>Ovis canadensis nelsoni</i>, Peninsular bighorn sheep</p>
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## Group 2 Species

<p><b><u>Invertebrates</u></b></p> <p><i>Ariolimax columbianus stramineus</i>, Palomar banana slug</p> <p><i>Helminthoglypta traski coelata</i>, Peninsular Range shoulderband snail</p> <p><i>Tryonia imitator</i>, Mimic tryonia snail</p> <p><i>Brennania belkini</i>, Belkin's dune fly</p> <p><i>Cicindela gabbi</i>, Gabb's tiger beetle</p> <p><i>Cicindela latesignata latesignata</i>, Sand dune tiger beetle</p> <p><i>Cicindela sinilis frosti</i>, Tiger beetle</p> <p><i>Cicindela trifasciata sigmoidia</i>, Mudflat tiger beetle</p> <p><i>Cicindela hirticollis gravida</i>, Sandy beach tiger beetle</p> <p><i>Cicindela latesignata obliviosa</i>, Oblivious tiger beetle</p> <p><i>Phobetus robinsoni</i>, Robinson's rain beetle</p> <p><i>Trigonoscuta blaisdelli</i>, Blaisdell trigonoscute weevil</p> <p><i>Danaus plexippus</i>, Monarch butterfly</p> <p><i>Megathymus yuccae harbisoni</i>, Coastal giant skipper</p> <p><b><u>Fish</u></b></p> <p><i>Cyprinodon macularis</i>, Desert pupfish</p> <p><i>Gasterosteus aculeatus williamsoni</i>, Unarmored three-spine stickleback</p> <p><b><u>Reptiles and Amphibians</u></b></p> <p><i>Taricha torosa torosa</i>, California newt</p> <p><i>Scaphiopus hammondi</i>, Western spadefoot toad</p> <p><i>Anniella pulchra pulchra</i>, Silvery legless lizard</p> <p><i>Coleonyx switaki</i>, Barefoot gecko</p> <p><i>Sauromalus obesus</i>, Chuckwalla</p> <p><i>Sceloporus graciosus vandenburgianus</i>, Southern sagebrush lizard</p> <p><i>Phrynosoma coronatum blainvillei</i>, San Diego horned lizard</p> <p><i>Eumeces skiltonianus interparietalis</i>, Coronado skink</p> <p><i>Aspidoscelis hyperythrus beldingi</i> (= <i>Cnemidophorus hyperythrus</i>), Belding's orange-throated whiptail</p> <p><i>Aspidoscelis tigris stejnegeri</i> (= <i>Cnemidophorus tigris multiscutatus</i>), Coastal western whiptail</p> <p><i>Charina trivirgata roseofusca</i>, Coastal rosy boa</p> <p><i>Diadophis punctatus similes</i>, San Diego ringneck snake</p> <p><i>Salvadora hexalepis virgultea</i>, Coast patch-nosed snake</p> <p><i>Lampropeltis zonata pulchra</i>, San Diego mountain kingsnake</p> <p><i>Thamnophis sirtalis ssp. novum</i>, South Coast garter snake</p> <p><i>Crotalus ruber ruber</i>, Northern red diamond rattlesnake</p> <p><b><u>Birds</u></b></p> <p><i>Gavia immer</i>, Common loon (Winter)</p> <p><i>Oceanodroma furcata plumbea</i>, Fork-tailed storm petrel (Ocean)</p> <p><i>Oceanodroma homochroa</i>, Ashy storm petrel (Ocean)</p> <p><i>Oceanodroma melania</i>, Black storm petrel (Ocean)</p> <p><i>Phalacrocorax auritus</i>, Double-crested cormorant (Non-breeding)</p>	<p><i>Pelecanus occidentalis californicus</i>, California brown pelican</p> <p><i>Pelecanus erythrorhynchos</i>, American white pelican (Winter)</p> <p><i>Anser caerulescens</i>, Snow goose (Winter)</p> <p><i>Branta canadensis</i>, Canada goose (Winter)</p> <p><i>Mycteria americana</i>, Wood stork (Non-breeding, very rare)</p> <p><i>Anas strepera</i>, Gadwall</p> <p><i>Dendrocygne bicolor</i>, Fulvous whistling-duck</p> <p><i>Aythya americana</i>, Redhead</p> <p><i>Bucephala islandica</i>, Barrow's goldeneye (Winter)</p> <p><i>Ixobrychus exilis hesperis</i>, Least bittern</p> <p><i>Ardea herodias</i>, Great blue heron</p> <p><i>Butorides striatus</i>, Green heron</p> <p><i>Egretta rufescens</i>, Reddish egret</p> <p><i>Grus canadensis</i>, Sandhill crane</p> <p><i>Mycteria Americana</i>, Wood stork (Non-breeding, very rare)</p> <p><i>Falco columbarius</i>, Merlin (Winter)</p> <p><i>Oreortyx pictus eremophila</i>, Mountain quail</p> <p><i>Numenius americanus</i>, Long-billed curlew (Non-breeding)</p> <p><i>Laterallus jamaicensis coturniculus</i>, California black rail (extirpated)</p> <p><i>Charadrius montanus</i>, Mountain plover (Winter)</p> <p><i>Larus atricilla</i>, Laughing gull (Non breeding, very rare)</p> <p><i>Larus californicus</i>, California gull (Non-breeding)</p> <p><i>Chlidonias niger</i>, Black tern (Non-breeder)</p> <p><i>Cerorhinca monocerata</i>, Rhinoceros auklet (Oceanic – Winter)</p> <p><i>Endomychura hypoleuca</i>, Xantus murrelet (Oceanic)</p> <p><i>Fratercula cirrhata</i>, Tufted puffin (Oceanic)</p> <p><i>Tyto alba</i>, Common barn-owl</p> <p><i>Asio flammeus</i>, Short-eared owl (Winter)</p> <p><i>Cypseloides niger</i>, Black swift (Non-breeder)</p> <p><i>Contopus borealis</i>, Olive-sided flycatcher</p> <p><i>Eremophila alpestris actis</i>, Horned lark</p> <p><i>Sialia mexicana</i>, Western bluebird</p> <p><i>Dendroica petechia brewsteri</i>, Yellow warbler</p> <p><i>Toxostoma bendirei</i>, Bendire's thrasher (Non-breeding)</p> <p><i>Piranga rubra</i>, Summer Tanager</p> <p><i>Junco hyemalis caniceps</i>, Gray-headed junco (Winter-rare)</p> <p><i>Toxostoma lecontei lecontei</i>, Leconte's thrasher</p> <p><i>Passerculus sandwichensis rostratus</i>, Large-billed savannah sparrow</p> <p><b><u>Mammals</u></b></p> <p><i>Chaetodipus californicus femoralis</i>, Dulzura Calif. pocket mouse</p> <p><i>Chaetodipus fallax fallax</i>, Northwestern San Diego pocket mouse</p> <p><i>Chaetodipus fallax pallidus</i>, Pallid San Diego pocket mouse</p> <p><i>Perognathus longimembris brevinasus</i>, Los Angeles little pocket mouse</p> <p><i>Perognathus longimembris internationalis</i>, Jacumba little pocket mouse</p>
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**Mammals, con't.**

*Onychomys torridus Ramona*, Southern grasshopper mouse  
*Neotoma lepida intermedia*, San Diego desert woodrat  
*Lepus californicus bennettii*, San Diego black-tailed jackrabbit  
*Odocoileus hemionus*, Southern mule deer  
*Macrotus californicus*, California leaf-nosed bat  
*Choeronycteris mexicana*, Mexican long-tongued bat  
*Myotis evotis*, Long-eared myotis  
*Myotis thysanodes*, Fringed myotis  
*Myotis volans*, Long-legged myotis  
*Myotis ciliolabrum*, Small-footed myotis  
*Myotis yumanensis*, Yuma myotis  
*Lasiurus blossevillei*, Western red bat  
*Euderma maculatum*, Spotted bat  
*Corynorhinus townsendii*, Townsend's big-eared bat  
*Antrozous pallidus*, Pallid bat  
*Nyctinomops femorosaccus*, Pocketed free-tailed bat  
*Nyctinomops macrotis*, Big free-tailed bat  
*Eumops perotis californicus*, Greater western mastiff bat  
*Bassariscus astutus*, Ringtail  
*Taxidea taxus*, American badger  
*Felis concolor*, Mountain lion

**Table 4**

**Terrestrial Vegetation Communities in San Diego County  
Based on Holland's Descriptions**

Suggested by  
Thomas Oberbauer, DPLU  
(revised March 2005)

\* Indicates revisions to Holland to the immediate left of asterisk

10000	NON-NATIVE VEGETATION, DEVELOPED AREAS, OR UNVEGETATED HABITAT			
	11000	Non-Native Vegetation*		
		11100	Eucalyptus Woodland	
		11200	Disturbed Wetland	
		11300	Disturbed Habitat	
	12000	Urban/Developed		
	13000	Unvegetated Habitat*		
		13100	Open Water	
			13110	Marine
				13111 Subtidal*
				13112 Intertidal*
			13120	Bay
				13121 Deep Bay*
				13122 Intermediate Bay*
				13123 Shallow Bay*
			13130	Estuarine
				13131 Subtidal*
				13132 Intertidal*
				13133 Brackish Water*
			13140	Fresh Water*
		13200	Non-Vegetated Channel, Floodway, Lakeshore Fringe*	
		13300	Saltpan/Mudflats*	
		13400	Beach	
	18000	General Agriculture		
		18100	Orchards and Vineyards	
		18200	Intensive Agriculture - Dairies, Nurseries, Chicken Ranches	
		18300	Extensive Agriculture – Field/Pasture*, Row Crops	
			18310	Field/Pasture*
			18320	Row Crops
20000	DUNE COMMUNITY			
	21000	Coastal Dunes		
		21100	Active Coastal Dunes (occurred at one time but now nearly extirpated)	
		21200	Foredunes	
			21230	Southern Foredunes (tiny fragments remaining in Imperial Beach and Los Peñasquitos Lagoon)
	22000	Desert Dunes		
		22100	Active Desert Dunes (very little in Borrego Valley)	
		22300	Stabilized and Partially-Stabilized Desert Sand Field (mostly in the eastern part of Borrego Valley; may be large enough to map from aeriels)	
	24000	Stabilized Alkaline Dunes*		
29000	ACACIA SCRUB*			

30000	SCRUB AND CHAPARRAL		
	31000	Coastal Bluff Scrub	
		31200	Southern Coastal Bluff Scrub (mapped in Point Loma and Torrey Pines State Park)
	32000	Coastal Scrub	
		32400	Maritime Succulent Scrub (Point Loma, etc.)
		32500	Diegan Coastal Sage Scrub
		32510	Coastal form*
		32520	Inland form (>1,000 ft. elevation)*
		32700	Riversidian Sage Scrub
		32710	Riversidian Upland Sage Scrub (scrub on Banner Grade may fit this category)
		32720	Alluvial Fan Scrub
	33000	Sonoran Desert Scrub	
		33100	Sonoran Creosote Bush Scrub
		33200	Sonoran Desert Mixed Scrub
		33210	Sonoran Mixed Woody Scrub
		33220	Sonoran Mixed Woody and Succulent Scrub
		33230	Sonoran Wash Scrub*
		33300	Colorado Desert Wash Scrub*
		33500	Calicolous Scrub*
		33600	Encelia Scrub*
	34000	Mojavean Desert Scrub	
		34300	Blackbush Scrub (micro locations on eastern edge of mountains)
	35000	Great Basin Scrub	
		35200	Sagebrush Scrub
		35210	Big Sagebrush Scrub
	36000	Chenopod Scrub	
		36110	Desert Saltbush Scrub
		36120	Desert Sink Scrub (in Borrego sink)
	37000	Chaparral	
		37100	Upper Sonoran Mixed Chaparral
		37120	Southern Mixed Chaparral
		37121	Granitic Southern Mixed Chaparral
		37122	Mafic Southern Mixed Chaparral (occurs on Los Posas and Boomer soils)
		37130	Northern Mixed Chaparral*
		37131	Granitic Northern Mixed Chaparral*
		37132	Mafic Northern Mixed Chaparral*
		37200	Chamise Chaparral
		37210	Granitic Chamise Chaparral*
		37220	Mafic Chamise Chaparral*
		37300	Red Shank Chaparral (near Campo and Chihuahua Valley)
		37400	Semi-Desert Chaparral (same as Desert Transition Chaparral; occurs in areas like Jacumba)
		37500	Montane Chaparral
		37510	Mixed Montane Chaparral
		37520	Montane Manzanita Chaparral
		37530	Montane Ceanothus Chaparral
		37540	Montane Scrub Oak Chaparral
		37800	Upper Sonoran Ceanothus Chaparral
		37810	Buck Brush Chaparral

	37830	<i>Ceanothus crassifolius</i> Chaparral	
	37900	Scrub Oak Chaparral	
	37A00	Interior Live Oak Chaparral	
	37B00	Upper Sonoran Manzanita Chaparral	
	37C00	Maritime Chaparral	
	37C30	Southern Maritime Chaparral (occurs in coastal San Diego County and has been described as Coastal Mixed Chaparral)	
	37G00	Coastal Sage-Chaparral Scrub	
	37K00	Flat-topped Buckwheat*	
39000	Upper Sonoran Subshrub Scrub		
40000	GRASSLANDS, VERNAL POOLS, MEADOWS, AND OTHER HERB COMMUNITIES		
	42000	Valley and Foothill Grassland	
	42100	Native Grassland	
	42110	Valley Needlegrass Grassland	
	42120	Valley Sacaton Grassland	
	42200	Non-Native Grassland	
	42210	Artichoke Thistle Dominant / Non-Native Grassland	
	42300	Wildflower Field (this is actually a subset of the above, but would be pertinent in the Cuyamaca Lake and Mataguay Valley areas)	
	42400	Foothill/Mountain Perennial Grassland*	
	42470	Transmontane Dropseed Grassland*	
44000	Vernal Pool		
	44300	Southern Vernal Pool	
	44320	San Diego Mesa Vernal Pool	
	44321	San Diego Mesa Hardpan Vernal Pool (northern mesas)	
	44322	San Diego Mesa Claypan Vernal Pool (southern mesas)	
45000	Meadow and Seep		
	45100	Montane Meadow	
	45110	Wet Montane Meadow	
	45120	Dry Montane Meadows	
	45300	Alkali Meadows and Seeps	
	45320	Alkali Seep	
	45400	Freshwater Seep	
46000	Alkali Playa Community		
	46100	Badlands/Mudhill Forbs*	
50000	BOG AND MARSH		
	52000	Marsh and Swamp	
	52100	Coastal Salt Marsh	
	52120	Southern Coastal Salt Marsh	
	52300	Alkali Marsh	
	52310	Cismontane Alkali Marsh	
	52400	Freshwater Marsh	
	52410	Coastal and Valley Freshwater Marsh	
	52420	Transmontane Freshwater Marsh (San Felipe Creek)	
	52430	Montane Freshwater Marsh	
	52440	Emergent Wetland	
60000	RIPARIAN AND BOTTOMLAND HABITAT		
	61000	Riparian Forests	
	61300	Southern Riparian Forest	
	61310	Southern Coast Live Oak Riparian Forest	

	61320	Southern Arroyo Willow Riparian Forest	
	61330	Southern Cottonwood-willow Riparian Forest	
61500	Montane	Riparian Forest	
	61510	White Alder Riparian Forest (Cold Spring in the Cuyamaca Mountains)	
61800	Colorado	Riparian Forest	
	61810	Sonoran Cottonwood-willow Riparian Forest (Coyote Canyon)	
	61820	Mesquite Bosque (Borrego Sink)	
62000	Riparian	Woodlands	
	62200	Desert Dry Wash Woodland	
	62300	Desert Fan Palm Oasis Woodland	
	62400	Southern Sycamore-alder Riparian Woodland (Pauma and Pala areas)	
63000	Riparian	Scrubs	
	63300	Southern Riparian Scrub	
	63310	Mule Fat Scrub	
	63320	Southern Willow Scrub	
	63321	<i>Arundo donax</i> Dominant / Southern Willow Scrub*	
63400	Great Valley	Scrub*	
	63410	Great Valley Willow Scrub*	
63500	Montane	Riparian Scrub	
63800	Colorado	Riparian Scrub	
	63810	Tamarisk Scrub	
	63820	Arrowweed Scrub	
70000	WOODLAND		
71000	Cismontane	Woodland	
	71100	Oak Woodland	
	71120	Black Oak Woodland (Cuyamaca and Mesa Grande)	
	71160	Coast Live Oak Woodland	
	71161	Open Coast Live Oak Woodland	
	71162	Dense Coast Live Oak Woodland	
	71180	Engelmann Oak Woodland	
	71181	Open Engelmann Oak Woodland	
	71182	Dense Engelmann Oak Woodland	
71200	Walnut	Woodland	
	71210	California Walnut Woodland (micro locations, such as at De Luz)	
72000	Pinon and Juniper	Woodlands	
	72300	Peninsular Pinon and Juniper Woodlands	
	72310	Peninsular Pinon Woodland	
	72320	Peninsular Juniper Woodland and Scrub	
75000	Sonoran Thorn	Woodland	
	75100	Elephant Tree Woodland (micro locations, such as at Indian Wash)	
77000	Mixed Oak	Woodland*	
78000	Undifferentiated Open	Woodland*	
79000	Undifferentiated Dense	Woodland*	
80000	FOREST		
81000	Broadleaved Upland	Forest	
	81100	Mixed Evergreen Forest (Palomar Mountain)	
	81300	Oak Forest	
	81310	Coast Live Oak Forest	
	81320	Canyon Live Oak Forest (may be represented in San Diego County in some form but apparently is intended for more	

		northern areas)
	81340	Black Oak Forest (as described in Holland represents apparent patches of oak in the midst of coniferous forests)
83000	Closed-cone Coniferous Forest	
	83100	Coastal Closed-cone Coniferous Forest
	83140	Torrey Pine Forest (not actually a closed cone pine)
	83200	Interior Closed-cone Coniferous Forest
	83230	Southern Interior Cypress Forest (83330, typo in original Holland document)
84000	Lower Montane Coniferous Forest	
	84100	Coast Range, Klamath and Peninsular Coniferous Forest*
	84140	Coulter Pine Forest
	84150	Bigcone Spruce (Bigcone Douglas Fir)-Canyon Oak Forest
	84200	Sierran Coniferous Forest
	84230	Sierran Mixed Coniferous Forest
	84500	Mixed Oak/Coniferous/Bigcone/Coulter*
85000	Upper Montane Coniferous Forest	
	85100	Jeffrey Pine Forest

**Table 5**

**Habitats and Mitigation Ratios**

These ratios for mitigation apply to unavoidable impacts. Following avoidance and minimization of on-site resources per Attachment B, on-site lands of long-term biological value may be credited against potential off-site mitigation on an in-kind basis (unless otherwise specified in an applicable county-adopted conservation plan). These ratios apply OUTSIDE of approved MSCP Plans. For lands inside approved MSCP Plans, consult the appropriate plan for required mitigation ratios.

<b>Holland Codes</b>	<b>Vegetation Communities</b>	<b>Mitigation Ratio</b>
11100	Eucalyptus Woodland	None
11200	Disturbed Wetland	3:1
11300	Disturbed Habitat	None
12000	Urban/Developed	None
13100	Open Water (13110-13140)	3:1
13200	Non-Vegetated Channel, Floodway, Lakeshore Fringe	3:1
13300	Saltpan/Mudflats	3:1
13400	Beach	3:1
18100	Orchards and Vineyards	None
18200	Intensive Agriculture - dairies, nurseries, chicken ranches	None
18310	Extensive Agriculture - field/pasture *	0.5:1
18320	Extensive Agriculture - row crops	None
21000	Coastal Dunes (21100-21230)	3:1
22000	Desert Dunes (22100-22300)	2:1
24000	Stabilized Alkaline Dunes	3:1
29000	Acacia Scrub	3:1
31000	Coastal Bluff Scrub	3:1
32400	Maritime Succulent Scrub	3:1
32500	Diegan Coastal Sage Scrub (32510-32520)	2:1
32700	Riversidian Sage Scrub (32710-32720)	2:1
33100	Sonoran Creosote Bush Scrub	1:1
33200	Sonoran Desert Mixed Scrub (33210-33230)	1:1
33300	Colorado Desert Wash Scrub	3:1
33500	Calcicolous Scrub	1:1
33600	Encelia Scrub	2:1
34000	Mojavean Desert Scrub (34300)	1:1
35000	Great Basin Scrub (35200-35210)	2:1
36110	Desert Saltbush Scrub	2:1
36120	Desert Sink Scrub	3:1
37121	Granitic Southern Mixed Chaparral	0.5:1

37122	Mafic Southern Mixed Chaparral	3:1
37131	Granitic Northern Mixed Chaparral	0.5:1
37132	Mafic Northern Mixed Chaparral	3:1
37210	Granitic Chamise Chaparral	0.5:1
37220	Mafic Chamise Chaparral	3:1
37300	Red Shank Chaparral	1:1
37400	Semi-desert Chaparral	1:1
37500	Montane Chaparral (37510-37540)	1:1
37800	Upper Sonoran Ceanothus Chaparral (37810-37830)	1:1
37900	Scrub Oak Chaparral	1:1
37A00	Interior Live Oak Chaparral	2:1
37B00	Upper Sonoran Manzanita Chaparral	1:1
37C00	Southern Maritime Chaparral (37C30)	3:1
37G00	Coastal Sage-Chaparral Scrub	2:1
37K00	Flat-topped Buckwheat	2:1
39000	Upper Sonoran Subshrub Scrub	1:1
42100	Native Grassland (42110-42120)	3:1
42200	Non-native Grassland *	0.5:1
42300	Wildflower Field	3:1
42400	Foothill/Mountain Perennial Grassland (42470)	3:1
44000	Vernal Pool (44300-44322)	5:1
45000	Meadow and Seep (45100-45400)	3:1
46000	Alkali Playa Community (46100)	3:1
52000	Marsh and Swamp (52100-52440)	3:1
61300	Riparian Forests (61300-61820)	3:1
62000	Riparian Woodlands (62200-62400)	3:1
63000	Riparian Scrubs (63300-63820)	3:1
70000	Woodland (71000-79000)	3:1
80000	Forest (81000-85100)	3:1

\* The mitigation ratio shall be 1:1 if the site is occupied by burrowing owl or the land is considered part of the Ramona grasslands.

**COUNTY OF SAN DIEGO**

**SURVEY, REPORT FORMAT AND MAPPING  
REQUIREMENTS**

**BIOLOGICAL RESOURCES**



**LAND USE AND ENVIRONMENT GROUP**

**Department of Planning and Land Use  
Department of Public Works**

**September 26, 2006**

## **PURPOSE**

These Biological Survey and Report Requirements provide guidance on conducting biological resources surveys and preparing reports for discretionary projects being processed by the Land Use and Environment Group. These guidelines are designed to:

1. Ensure the quality, accuracy and completeness of biological surveys and reports.
2. Aid in staff's efficient and consistent review of maps and documents from different consultants.
3. Provide adequate information to make appropriate planning decisions and to make determinations regarding conformance with applicable regulations.
4. Increase the efficiency of the environmental review process and avoid unnecessary time delays.

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## **1.0 INTRODUCTION**

All biological maps and reports shall follow the requirements in this document. The overall length of reports and the amount of information to include will vary depending on the size and scope of the project, the regional setting, the biological resources present and the degree of impacts proposed.

When biological resources are present on a project site, the County's Scoping Letter may require that one of the following documents be submitted.

### **1.1 Full Biological Resource Report (Full Report)**

A Full Biological Resource Report (Full Report) is required for larger projects and/or projects with potential significant biological impacts. The full report must include a Biological Resource Map.

### **1.2 Biological Resource Letter Report (Letter Report)**

A Biological Resources Letter Report may be adequate for smaller projects and those with limited biological resources present or expected. The determination of whether a letter report would be required is made by a County staff biologist, based on a project-specific analysis at project scoping. Based on the information provided in the biological letter report, DPLU may require additional focused surveys and/or a Full Biological Resource Report. The letter report must include a Biological Resource Map.

### **1.3 Biological Resource Map (Bio Map)**

For projects with limited natural or naturalized areas and no sensitive species anticipated, a Biological Resources Map may be adequate without a report. The consultant may, at their option, submit a brief explanation of the map. If the County staff biologist determines that further information is necessary, the scoping letter may request other documentation be submitted with the Map.

## **2.0 SURVEY AND REPORT FORMAT REQUIREMENTS**

### **2.1 General Report Guidelines**

All written reports shall follow these general guidelines:

- Reports should be technical in nature and should avoid anecdotal or extraneous information.
- Reports should be concise and written in a professional manner suitable for peer review. Staff may reject reports based on quality if the report is written in such a manner that a timely and accurate review cannot be completed.

- Biological reports should be bound such that staff may easily review the document. Shorter reports may be stapled, but longer documents should be bound by other methods, such as comb binding.
- Attached plot plans and Biological Resource Maps must be to scale and contain a north arrow and both number and bar scales. When maps are reduced, adjust the scale, or mark the map “Reduced/Use Bar Scale”.
- For Full Biological Resource Reports, each chapter and subsection of the report should be clearly delineated with bold print and/or underlining and will use the numerical headings contained in these Biological Resources Survey and Report requirements.
- Draft copies of the report shall have all changes made in response to staff comments in strikeout/underline form. Final copies of the report shall be clean, with all editing marks removed.

All biological reports will be reviewed for technical accuracy and completeness by a staff biologist. Reports are considered draft until staff determines the report to be complete. Each submittal and review of a draft biological report is considered an “iteration.” During each iteration, staff will either determine the report to be complete or respond with comments for necessary changes. The County expects that the first iteration will be as complete and comprehensive as possible to address issues in the Scoping Letter. However, each report may have up to three iterations, after which project denial may be recommended due to inadequate environmental progress.

## **2.2 Full Biological Resource Report**

### **2.2.1 Outline**

The required sections of the full Biological Resource Report are provided in the outline below:

#### **FULL BIOLOGICAL RESOURCES REPORT OUTLINE**

**COVER PAGE**

**TABLE OF CONTENTS**

**GLOSSARY OF TERMS AND ACRONYMS**

**SUMMARY**

**1.0 INTRODUCTION**

**1.1 Purpose of the Report**

**1.2 Project Location and Description**

### **1.3 Survey Methodologies**

### **1.4 Environmental Setting (Existing Conditions)**

- 1.4.1 Regional Context
- 1.4.2 Habitat Types/Vegetation Communities
- 1.4.3 Flora
- 1.4.4 Fauna
- 1.4.5 Sensitive Plant Species
- 1.4.6 Sensitive Animal Species
- 1.4.7 Wetlands/Jurisdictional Waters
- 1.4.8 Habitat Connectivity and Wildlife Corridors

### **1.5 Applicable Regulations**

## **2.0 PROJECT EFFECTS**

## **3.0 SPECIAL STATUS SPECIES**

- 3.1 **Guidelines for the Determination of Significance**
- 3.2 **Analysis of Project Effects**
- 3.3 **Cumulative Impact Analysis**
- 3.4 **Mitigation Measures and Design Considerations**
- 3.5 **Conclusions**

## **4.0 RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITY**

- 4.1 **Guidelines for the Determination of Significance**
- 4.2 **Analysis of Project Effects**
- 4.3 **Cumulative Impact Analysis**
- 4.4 **Mitigation Measures and Design Considerations**
- 4.5 **Conclusions**

## **5.0 JURISDICTIONAL WETLANDS AND WATERWAYS**

- 5.1 **Guidelines for the Determination of Significance**
- 5.2 **Analysis of Project Effects**
- 5.3 **Cumulative Impact Analysis**
- 5.4 **Mitigation Measures and Design Considerations**
- 5.5 **Conclusions**

## **6.0 WILDLIFE MOVEMENT AND NURSERY SITES**

- 6.1 **Guidelines for the Determination of Significance**
- 6.2 **Analysis of Project Effects**
- 6.3 **Cumulative Impact Analysis**
- 6.4 **Mitigation Measures and Design Considerations**
- 6.5 **Conclusions**

## **7.0 LOCAL POLICIES, ORDINANCES, ADOPTED PLANS**

- 7.1 Guidelines for the Determination of Significance**
- 7.2 Analysis of Project Effects**
- 7.3 Cumulative Impact Analysis**
- 7.4 Mitigation Measures and Design Considerations**
- 7.5 Conclusions**

## **8.0 SUMMARY OF PROJECT IMPACTS AND MITIGATION**

## **9.0 REFERENCES**

## **10.0 LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED**

**TECHNICAL APPENDICES / ATTACHMENTS (order will be determined by reference in report)**

- A. Observed Species List - Flora**
- B. Observed Species List - Fauna**
- C. Potential Sensitive Species Table – Flora**
- D. Potential Sensitive Species Table – Fauna**
- E. Natural Diversity Database Form(s) (if applicable)**
- F. Biological Resource Map and project plot plan/map (unless included within body of report)**
- G. Open Space Map (if applicable, unless included within body of report)**
- H. Signed protocol survey reports**

### **2.2.2 Content**

**Note:** The numbering identified below should be used when preparing technical studies. The numbers and titles are shown in italics only for purposes of this document and are not required to be formatted in italics for the technical study.

#### ***COVER PAGE***

The cover page shall include the following information:

- Project common name
- Project numbers (i.e. TM, ZAP, etc.) including the environmental log number (ER)
- Date (original report date plus all revisions) must be revised during each iteration of the draft report)
- Name of County Approved CEQA Consultant preparing document, firm name (if applicable) and address
- Signature of County Approved CEQA Consultant

- Project proponent's name and address
- The following statement: Prepared for The County of San Diego

## ***TABLE OF CONTENTS***

The table of contents must follow the order and format outlined in this document. Page numbers should be assigned when possible. Titles of each Appendix or Attachment should be listed in the order in which they are found in the document.

## ***GLOSSARY OF TERMS AND ACRONYMS***

Provide a list of terms and acronyms used in the report.

## ***SUMMARY (ABSTRACT)***

Provide a brief summary of the project, the biological resources present on the site, potential impacts and proposed mitigation. No new information should be provided in the summary that is not further explained elsewhere in the document. The purpose of the summary is to provide a quick reference for the public and decision-makers. Therefore, the language should be less technical than that used in the remainder of the document.

### ***1.0 INTRODUCTION***

#### ***1.1 Purpose of the Report***

Discuss the purpose of the report. Depending on the site location, type of project and biological resources, the report may document compliance with the County's MSCP Subarea Plan, Resource Protection Ordinance, Biological Mitigation Ordinance or Habitat Loss Permit Ordinance and all applicable federal and state laws.

Example language: "The purpose of this report is to document the biological resources identified as present or potentially present on the project site; identify potential biological resource impacts resulting from the proposed project; and recommend measures to avoid, minimize, and/or mitigate significant impacts consistent with federal, state and local rules and regulations including the California Environmental Quality Act (CEQA), and County of San Diego Multiple Species Conservation Program (MSCP) Subarea Plan, Resource Protection Ordinance (RPO) and Biological Mitigation Ordinance (BMO)."

#### ***1.2 Project Location and Description***

Project Location. Discuss the project location in the regional and local context. Include a USGS topographic map with the site and APN clearly identified as numbered figure(s).

**Project Description.** Provide a very detailed description of the project, including all on-site and off-site components and any design alternatives. An 8.5"x11" or 11"x17" copy of the plot plan/map must be attached to the report as (a) numbered figure(s).

Describe the whole of the project, not just the immediate action being pursued. For example, a Tentative Map or Tentative Parcel Map proposes to subdivide property. The project in question is not just the increase in the number of lots, but the ultimate outcome of residential or commercial development. Another example is an application for a grading permit. The project is not just the immediate grading, but also the end result for which the land was graded.

The project description should be as detailed as possible, including details such as:

- Size of project site and area proposed for development.
- Purpose and scale of proposed uses associated with the project, such as residential development or recreational camping.
- Proposed structures (size, location, purpose, etc.).
- Location of all easements, including those for biological open space, steep slope easements, limited building zone easements, utilities and roads.
- Proposed or potential uses within open space, including proposed buffers, existing structures and/or uses that will continue under the proposed action, any requirements for access to archaeological/cultural sites, etc.
- Off-site improvements, such as for roads, utility extensions, or stormwater facilities.
- Fire fuel modification and vegetation management requirements.
- Construction equipment staging areas.
- Proposed site access.

### **1.3      Survey Methods**

Provide a discussion of literature reviews done prior to initiation of the surveys. Examples may include, but are not limited to: the U.S. Department of Agriculture Soil Conservation Service map for the project area; a database query of potential on-site sensitive species based on a determination of the site physical characteristics (e.g., location, elevation, soils/substrate, and topography); documentation of California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDB)/U.S. Fish and Wildlife Service (USFWS) Geographical Information System (GIS) records for the project vicinity; and previous reports prepared for the project area.

Describe the methods and materials used to survey the property. At a minimum, the entire property must be walked and all biological resources recorded and mapped according to the County's Biological Resource Mapping Requirements. The length of time a survey should take is entirely dependent upon the size of the property and the resources present. Staff may request an additional survey if the time spent in

the field does not appear adequate to have recorded all resources or the results of the survey would have been significantly affected by season, time of day or weather conditions.

Surveys must include the entire project parcel(s). In addition, habitat mapping must include land 100 feet off site consistent with section 3.1.1. In rare cases where a project only affects a small portion of a large parcel, the need to survey the entire parcel may be waived. If you wish to pursue this waiver, contact the Department of Planning and Land Use (DPLU) Project Manager.

Additional directed surveys may also be required based on season or sensitivity of species. Directed surveys must be performed by biologists with demonstrable knowledge in field detection of the subject species. Focused surveys for federally listed species must follow USFWS protocol, when such protocol exists. Permit numbers for biologists performing these focused surveys must be provided for each survey must be attached as a table in the biological report. If no protocol has been established, the methods of the directed search must be described in the report. At the very least, directed surveys should include walking transects across all areas of the property with potential habitat for the species. All point locations and inferred territories of these species must be included on the Biological Resources Map.

When a sensitive species is identified on a property, the number and density of individuals should be provided. It may also be necessary to provide these measurements (through additional field work and/or historical/available data) for off-site areas in order to fully determine the true size and extent of the local population. When feasible, the actual number of individuals should be counted in the field. When a plant species covers several acres (3 acres or more), the number and density may be estimated using a quadrat sampling method. When the plant species is a ground-cover variety or individuals are not easily discernable from one another, acreage may be used as a measurement and the density presented as a percentage cover per acre. For wildlife species, the number of individuals should be approximated based on actual sightings and other available signs, such as fecal deposits, tracks and nests or burrows. The method by which the number of individuals and density of a species is determined must be described in the biological report.

Wetlands surveys will be required when a wetland resource or jurisdictional water is identified on project site. A basic wetland survey consists of mapping the boundaries of the wetland habitat based on the specific County, State and Federal wetland definitions. Field site visits and aerial photographs generally provide enough information to complete the basic wetland survey. However, a full wetland delineation survey following the US Army Corps of Engineers standards, including soil testing, may be required when the boundaries of the wetlands are not easily discernable.

This section of the report should also include the following:

- Discuss any significant limitations to each of the surveys performed, such as timing, season or inability to access or observe portions of the property or observe adjacent properties. All reports should acknowledge the existence of time and seasonal variations such that not all species on the site would be detected.
- It may be necessary to include a map of the property depicting the areas surveyed. For example, some lands may not have been surveyed because access was denied. Where directed sensitive species surveys are required, portions of the property may not provide suitable habitat/conditions for the species. A map shall be included when transects, quadrat sampling or sample points are used.
- This section shall include a numbered table listing the dates, times and weather conditions (as applicable) as well as the biologist(s) and any applicable permit numbers performing each survey.

#### **1.4 Environmental Setting**

Describe the physical characteristics, such as topography, elevation, climate, water resources and soil types. Briefly describe the general vicinity in terms of type and density of development and infrastructure. Specify public and private ownership of land in the vicinity, particularly for preserved lands. Describe any preserved lands adjacent or contiguous with the site. Describe the existing land uses on site and on surrounding lands, including unauthorized activities.

##### **1.4.1 *Regional Context***

Provide a general overview of the following, as applicable. This section is not intended to provide detailed analysis of habitats, corridors, etc., as that analysis is included in later sections.

- Location relative to approved or proposed conservation plans
- Adopted or proposed NCCP subareas
- NCCP designations (such as PAMA, BRCA, Take Authorized, etc.)
- Adjacent to preserved lands, national forests, BLM lands
- Jurisdictional waterways and watersheds
- The section should reference aerial photos as numbered figure(s) showing the relationship of the project site with surrounding lands.

##### **1.4.2 *Habitat Types/Vegetation Communities***

Describe each vegetation community identified on the property, addressing the following information. This section shall include a numbered table containing acreages.

- Reference the modified Holland code classification system as modified by Oberbauer (Table 4 in the Guidelines for Determining Significance) for each vegetation community.
- List the dominant (indicator) species present.

- Describe the quality of the habitat in general, including the level of previous disturbance.
- Describe the species abundance, composition and diversity in terms of vegetative structure.
- When applicable, provide the sensitivity level (i.e. Tier level in MSCP) of each habitat type.
- Discuss the conservation value of each habitat type in terms of regional and local importance relative to other areas of similar habitat off-site.
- Discuss whether the habitat type is considered sensitive by the County, state or federal agencies, as defined by these requirements.
- Describe any unique habitat types and/or physical features of the land that occur on-site. Unique habitats are generally those considered rare due to physical constraints, such as soil type or topography, or those habitats created by unusual circumstances. Examples of unique habitats include vernal pools, gabbro-based or rare successional habitat communities. Unique habitats may also be defined by a defined physical or biological habitat component providing a specialized function for a specific limited distribution species such as butterfly hill-topping or a heron rookery. Unique features include any physical characteristic that might have unusual or exceptional biological value such as cliff faces, rock outcrops, sandstone bluffs, stream banks and bars. Unique features will often be geological in nature, but may also be the result of a water resource, soil, or manufactured structures functioning as roosts or rookeries.

#### **1.4.3     *Flora***

Provide a general overview of the types of plant species identified on the site. For example, determine whether the majority of the plant species are non-native, disturbance-related or natives generally found in more pristine environments. Briefly list the more common plant species identified. A complete list of all plant species identified on the site must be attached to the report, including the common name, scientific name and the vegetation community in which the plant species was identified.

#### **1.4.4     *Fauna***

Format and discussion of fauna shall follow the instructions in Section 1.4.3.

#### **1.4.5     *Sensitive Plant Species***

The report must address all sensitive plant species that occur or have a high probability of occurring on the site or on land immediately adjacent to the site. This section should discuss the results of any directed surveys or habitat assessments.

Sensitive species are those considered sensitive by the County of San Diego, or any State or Federal agency. Potential to occur is derived from locality, known populations, soil or habitat types, elevation and a number of other factors.

The report must provide a table listing any sensitive species detected or having potential to be present, including its conservation status, preferred habitat (i.e. vegetation, soil, elevation range, etc.) and whether the species was detected on the site. For species not detected, the table must include an evaluation of the potential for the species to be present currently or in the future and the probable reason why the species was not detected during the survey.

The report text must also contain a separate discussion for each sensitive species identified. For each species, provide the number, density and location of individuals on the site (refer to *Section 1.3* for methods of measurement). The report should also discuss the regional significance of the population found on the site. For each sensitive species identified, a Natural Diversity Database Form must be completed with one copy sent to the California Department of Fish and Game and one copy attached to the final report.

#### **1.4.6                    *Sensitive Wildlife Species***

Format and discussion of sensitive wildlife species shall follow the instructions in *Section 1.4.5*. Sensitive species are those considered sensitive by the County of San Diego, or any State or Federal agency.

#### **1.4.7                    *Wetlands/Jurisdictional Waters***

Describe any wetland resources and jurisdictional waters identified on the site. Provide an estimate of acreage classified as County, State and/or Federal wetlands and jurisdictional waters along with an explanation as to how the boundaries were delineated. Include a brief list of the dominant plant and wildlife species present. Describe the quality of the wetland habitat in terms of disturbance, canopy cover, species diversity and connectivity to off-site habitat. Discuss the wetland's local and regional importance.

Discuss the wetland functions and values, and include a description of the habitats' location relative to hydrologic features (*i.e.*, what is downstream from the waterway). Wetland function refers to biophysical benefits, such as groundwater recharge and discharge, flood control, flow alteration, sediment stabilization, erosion control, toxicant retention, nutrient removal and cycling, and wildlife habitat for diversity and abundance. Wetland value refers to anthropomorphic benefits such as commercial enterprise, recreation and waste assimilation, and non-market values such as aesthetics, uniqueness and heritage.

#### **1.4.8                    *Habitat Connectivity and Wildlife Corridors***

Describe the extent of habitat connectivity between on and off-site lands. Provide a general description of any connection that exists, including estimated acreage and habitat types. Since indirect habitat connectivity is often very important, especially in

more urbanized area, discuss the project site relative to surrounding areas that might serve as an island or “stepping-stone”/archipelago connection. When habitat connectivity exists between on and off-site areas, list the species that are likely to use the connection.

Discuss whether the connectivity creates a block of habitat with one or more of the following values:

- A core area of habitat suitable for resident populations
- A local wildlife corridor
- A block of habitat within a larger regional linkage

This section must also discuss wildlife corridors and linkages. Include a separate discussion of local wildlife corridors and regional linkages, addressing the presence or absence of both. Corridors are generally local pathways connecting short distances usually covering one or two main types of vegetation communities. Linkages are landscape level connections between very large core areas and generally span several thousand feet and cover multiple habitat types. Regional linkages have been identified on the MSCP Subarea Plan maps. Outside MSCP, regional vegetation maps and aerial photos may be used to evaluate the potential for a linkage.

When discussing wildlife corridors and linkages, describe the topography, habitat connectivity (direct or indirect), and vegetative cover. Discuss whether linear features, such as watercourses, ridges or valleys, are present. If a corridor is present, provide widths, lengths and describe existing adjacent land uses. List the types of species that are likely to use the corridor. Describe any existing development or circumstance that might hinder existing corridors or prevent future connections from being formed.

## **1.5      Applicable Regulations**

Briefly detail the County, State and Federal environmental regulations that apply to the project.

## **2.0      *PROJECT EFFECTS***

This section shall summarize biological effects anticipated as a result of the proposed action, including but not limited to construction activities, post-construction impacts and off-site impacts.

For habitats/vegetation communities, including wetlands and jurisdictional waters, summarize the acreages in a numbered table, generally following the example below. The table shall include all habitats/vegetation communities on site, including those that are not impacted or do not require mitigation. For species impacts, summarize the anticipated loss of sensitive plant and wildlife populations or

individuals. Summarize any impacts to wildlife corridors, linkages and wildlife nursery sites.

**Table X. Sample, Habitat/Vegetation Communities and Impacts**

Habitat / Vegetation Community	Existing (acres) <sup>1</sup>	Impacts (acres) <sup>1</sup>	Impact Neutral (acres) <sup>2</sup>
<b>TOTAL</b>			

<sup>1</sup> An estimate of the on-site acreage, generally rounded to the nearest tenth of an acre. For particularly sensitive habitats such as wetlands and vernal pools, the acreage may be presented in square footage or hundredths/thousandths of an acre.

<sup>2</sup> Include a column for impact neutral acreage, if applicable. For example, all wetlands and wetland buffers shall be counted as "impact neutral."

### **3.0 SPECIAL STATUS SPECIES**

#### **3.1 Guidelines for the Determination of Significance**

Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Any of the following conditions would be considered significant:

- A. The project would impact one or more individuals of a species listed as federally or state endangered or threatened.
- B. The project would impact the regional long-term survival of a County Group A or B plant species, or a County Group I animal species, or a species listed as a state Species of Special Concern.
- C. The project would impact the regional long-term survival of a County Group C or D plant species or a County Group II animal species.
- D. The project may impact arroyo toad aestivation or breeding habitat.
- E. The project would impact golden eagle habitat.
- F. The project would result in a loss of functional foraging habitat for raptors.
- G. The project would increase noise and/or nighttime lighting to a level above ambient proven to adversely affect sensitive species.
- H. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or an area that supports multiple wildlife species.
- I. The project would increase human access or predation or competition from domestic animals, pests or exotic species to levels that would adversely affect sensitive species.

- J. The project would impact nesting success of sensitive animals (as listed in the Guidelines for Determining Significance) through grading, clearing, fire fuel modification, and/or noise generating activities such as construction.

### **3.2 Analysis of Project Effects**

Using the guidelines in *Section 3.1*, discuss the significance of any potential direct impacts to sensitive species identified on the site. Impacts are expected when a plant species was identified outside of areas proposed for preservation, or a wildlife species was identified as nesting, foraging or otherwise occurring in areas outside of the land proposed for preservation. Provide numbers of individuals and relative percentage of the population that will be impacted. Refer to *Section 1.3* for methods by which to measure population size and density. The analysis must make a conclusion, based on the significance guidelines, whether or not these impacts are significant.

Guidelines that do not apply to the proposed action shall be listed with a brief explanation of why the guideline does not apply. For example, "The proposed project will not result in significant impacts under the following guidelines for the following reasons:

- 3.1.A. No state or federally listed species would be impacted by the project.
- 3.1.D. The site contains no habitat suitable for the arroyo toad.
- 3.1.E. No golden eagles are on site or within 4,000 feet of the site."

### **3.3 Cumulative Impact Analysis**

A reasonable list of cumulative projects should be compiled based on past, present, and future projects that could also cumulatively contribute to the project's significant impacts. For each potential impact, a study area must be defined. The consultant, in consultation with County staff, must determine the extent of the area used in the cumulative analysis. The area should be defined by considering the following factors and others, as appropriate: land use, MSCP or HCP boundaries, species ranges, habitats, site conditions, topography, natural history of the species, best available scientific literature, etc., using best professional judgment. Analyze the significance of the cumulative impact to special status species. The consultant shall determine whether the project makes a cumulatively considerable contribution to special status species, based on a project-specific analysis and the factors described above. When the project's contribution to the cumulative impact is significant, the analysis shall discuss mitigating effects of existing regional conservation plans if applicable. Mitigation may also include a reduction in the project's contribution to the loss, or a specific on- or off-site mitigation plan

For larger projects and Environmental Impact Reports, the analysis of potential cumulative impacts should be structured as follows: "The cumulative projects study area was chosen because xxx. The cumulative projects will impact xxx (sample:

xxx individuals or xxx percent). This is/is not significant because xxx.” (If significant), “The project’s contribution is xxx percent of the total cumulative impact. This is/is not considerable because xxx.” For smaller-scale projects and those covered by an approved multi-species conservation plan, other formats for cumulative impact analysis may be appropriate. However, a project may have significant cumulative effects notwithstanding the project’s conformance with a regulatory program or existing mitigation plan such as a Habitat Conservation Plan (HCP) or Natural Communities Conservation Plan (NCCP). Cumulative mitigation measures should only address significant cumulative impacts.

### **3.4 Mitigation Measures and Design Considerations**

Provide brief descriptions of proposed mitigation measures and design considerations. Refer to Attachment A of these guidelines for the County’s Typical Mitigation Measures. For each measure, state the impact being mitigated. Some mitigation measures will require additional details, such as a Resource Management Plan (RMP)/Habitat Management Plan (HMP).

### **3.5 Conclusions**

For each significant impact, determine if the proposed mitigation measures have reduced the significance level to “less than significant” in accordance with the stated Significance Guidelines.

## **4.0 RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITY**

The format of the biology reports is based on the CEQA Guidelines, which discusses riparian and sensitive habitats in a separate section from wetlands. Jurisdictional wetlands are discussed in *Section 5.0*.

### **4.1 Guidelines for the Determination of Significance**

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Any of the following conditions would be considered significant:

- A. Project-related construction, grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in Table 5, excluding those without a mitigation ratio) on or off the project site.
- B. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by ACOE, CDFG and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in

velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity and abundance.

- C. The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historical low groundwater levels.
- D. The project would increase human access or competition from domestic animals, pests or exotic species to levels proven to adversely affect sensitive habitats.
- E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.

## **4.2      Analysis of Project Effects**

Using the guidelines in *Section 4.1*, discuss the significance of all direct and indirect vegetation and habitat impacts that might occur as a result of the proposed project. The evaluation should consider the type and density of proposed development, potential uses within the open space and basic project design. Along with each impact, provide a determination as to whether the impact is significant and whether mitigation may be applied to reduce the significance. The determination of significance should be accompanied by a brief explanation as to how the conclusion was reached.

All potential impacts resulting from any part of the project must be included, even if the impacts are temporary, off-site or may not occur until a future phase of the project, such as grading following a Tentative Map. The impact analysis shall be separated according to the significance guidelines listed in *Section 4.1*. Guidelines that do not apply to the proposed action shall be listed with a brief explanation of why the guideline does not apply.

Habitat that will potentially be removed as a result of grading or clearing associated with the project is considered impacted. For most discretionary actions, any habitat not protected within open space easements is considered impacted since few restrictions apply to prevent future clearing. Use permits and other types of actions tied directly to plot plans may, in some cases, consider impacts only to that land specifically proposed for development. In all cases, fire fuel modification and vegetation management requirements, and off-site improvements are part of the project and are considered direct impacts.

When a project proposes a subdivision that will result in residential lots larger than 15 acres each, the applicant may choose to either consider the whole site impacted, or to limit the impact areas. For these large lot subdivisions, the following guidance applies:

1. The applicant for the proposed map may choose to consider all land not included within an open space easement as impacted. By doing this during the map phase, impacts would be assessed and mitigation proposed for the entire site. The future parcel owner would still be required to obtain permits for new discretionary actions not foreseen in the map phase (such as additional fire fuel modification and vegetation management, agricultural clearing, and clearing for accessory structures), but the environmental review process for those future discretionary actions would be shortened.
2. The applicant may choose to have just 5 acres considered in the impact and mitigation analysis. The proposed map must show where these 5 acres would likely be cleared and those would be the areas analyzed. The environmental documents would state that any remaining areas not included within open space were considered “impact neutral” for purposes of analysis, meaning that the area is not considered impacted or used for mitigation credit. Any future clearing within the “impact neutral” areas would require appropriate permits and full environmental review.

The analysis must make a conclusion, based on the significance guidelines, whether or not these impacts are significant.

#### **4.3 Cumulative Impact Analysis**

Format and discussion shall follow the instructions in *Section 3.3*. For habitats and vegetation communities, the study area may be the County defined “ecoregion” or other applicable area. Format and discussion shall follow the instructions in *Section 3.3*.

#### **4.4 Mitigation Measures and Design Considerations**

Provide brief descriptions of proposed mitigation measures and design considerations. Refer to Attachment A of these guidelines for the County’s Typical Mitigation Measures. For each measure, state the impact being mitigated. Some mitigation measures may require additional details, such as:

1. Revegetation Plans – a Final Plan may be required as a condition of the project, to be completed at a later date (i.e. prior to grading or finalizing the map). The biological report shall provide a Conceptual Revegetation Plan in accordance with the County’s Guidelines.
2. Resource Management Plans (RMP) (formerly known as Habitat Management Plans (HMPs) – a Final Plan may be required as a condition of the project, to be completed at a later date (i.e. prior to grading or finalizing the map). The biological report shall provide a Conceptual Resource Management Plan in accordance with the County’s Guidelines.

#### **4.5      Conclusions**

Format and discussion shall follow the instructions in Section 3.5.

#### **5.0      *JURISDICTIONAL WETLANDS AND WATERWAYS***

The format of the biology reports is based on the CEQA Guidelines, which discusses riparian and sensitive habitats in a separate section from wetlands. Riparian habitat is discussed in *Section 4.0*.

#### **5.1      Guidelines for the Determination of Significance**

Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?

*Refer to Section 4.1 guidelines above.*

#### **5.2      Analysis of Project Effects**

Describe all impacts to Federal, State, and County wetlands and/or jurisdictional waters. The report shall state whether impacts would require State or Federal wetland permits or Regional Water Quality Control Board (RWQCB) permits. The analysis must make a conclusion, based on the significance guidelines, whether or not these impacts are significant. Note: for projects subject to the RPO, avoidance of wetlands and wetland buffers is required.

#### **5.3      *Cumulative Impact Analysis***

Format and discussion shall follow the instructions in Section 3.3.

#### **5.4      Mitigation Measures and Design Considerations**

Format and discussion shall follow the instructions in Section 3.4.

#### **5.5      Conclusions**

Format and discussion shall follow the instructions in Sections 3.5.

## **6.0 WILDLIFE MOVEMENT AND NURSERY SITES**

### **6.1 Guidelines for the Determination of Significance**

Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Any of the following conditions would be considered significant:

- A. The project would prevent wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.
- B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.
- C. The project would create artificial wildlife corridors that do not follow natural movement patterns.
- D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.
- E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path.
- F. The project does not maintain adequate visual continuity (i.e., long lines-of-site) within wildlife corridors or linkage.

### **6.2 Analysis of Project Effects**

Using the guidelines in Section 6.1, discuss the project site in terms of existing wildlife corridors and linkages and wildlife nursery sites. Discuss corridor/linkage functions and what species are likely to be using the site for movement and breeding activities. Analyze whether there will be impacts to existing habitat connectivity both on- and off-site, or to a native wildlife nursery sites, based on the likely functions that will be retained after project implementation. Provide details such as extent of impact and whether connectivity and nursery sites might be retained elsewhere.

This section must also discuss the potential for increased wildlife road fatalities due to increased project-related traffic. Analyze the potential impacts, including the effects of corridor constriction or elimination from the project itself and/or from any proposed barriers or crossings. Include details regarding corridor widths and lengths that will result from the project. The analysis must make a conclusion, based on the significance guidelines, whether or not these impacts are significant.

Guidelines that do not apply to the proposed action shall be listed with a brief explanation of why the guideline does not apply.

### **6.3 Cumulative Impact Analysis**

Format and discussion shall follow the instructions in Section 3.3.

### **6.4 Mitigation Measures and Design Considerations**

Format and discussion shall follow the instructions in Section 3.4.

### **6.5 Conclusions**

Format and discussion shall follow the instructions in Section 3.5.

## **7.0 LOCAL POLICIES, ORDINANCES, ADOPTED PLANS**

### **7.1 Guideline for the Determination of Significance**

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?

Any of the following conditions would be considered significant:

- A. For lands outside of the MSCP, the project would impact coastal sage scrub (CSS) vegetation in excess of the County's 5% habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.
- B. The project would preclude or prevent the preparation of the subregional Natural Communities Conservation Planning Process (NCCP). For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.
- C. The project will impact any amount of sensitive habitat lands as outlined in the Resource Protection Ordinance (RPO).
- D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the Natural Communities Conservation Planning Process (NCCP) Guidelines.
- E. The project does not conform to the goals and requirements as outlined in any applicable Habitat Conservation Plan (HCP), Habitat Management Plan (HMP), Special Area Management Plan (SAMP), Watershed Plan, or similar regional planning effort.
- F. For lands within the Multiple Species Conservation Program (MSCP), the project would not minimize impacts to Biological Resource Core Areas (BRCAs), as

defined in the Biological Mitigation Ordinance (BMO).

- G. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.
- H. The project does not maintain existing movement corridors and/or habitat linkages as defined by the Biological Mitigation Ordinance (BMO).
- I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.
- J. The project would reduce the likelihood of survival and recovery of listed species in the wild.
- K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (Migratory Bird Treaty Act).
- L. The project would result in the take of eagles, eagle eggs or any part of an eagle (Bald and Golden Eagle Protection Act).

## **7.2      Analysis of Project Effects**

Using the guidelines in Section 6.1, discuss how the project will comply with local policies, ordinances, and plans. Guidelines that do not apply to the proposed action shall be listed with a brief explanation of why the guideline does not apply.

## **7.3      Cumulative Impact Analysis**

Format and discussion shall follow the instructions in Section 3.3.

## **7.4      Mitigation Measures and Design Considerations**

Format and discussion shall follow the instructions in Section 3.4.

## **7.5      Conclusions**

Format and discussion shall follow the instructions in Section 3.5.

## **8.0      SUMMARY OF PROJECT IMPACTS AND MITIGATION**

This section shall provide a brief text summary of project impacts and mitigation. The report shall include a numbered table with habitat acreages, generally following the example below. The table shall include all habitats/vegetation communities on site, including those that are not impacted or do not require mitigation.

**Table X.X. Sample, Habitat/Vegetation Communities, Impacts, Mitigation**

Habitat / Vegetation Community	Existing (acres) <sup>1</sup>	Impacts (acres) <sup>1</sup>	Mitigation Ratio	Mitigation Required (acres)	Preserved On-Site (acres) <sup>1</sup>	Impact Neutral (acres) <sup>2</sup>	Off-Site Mitigation (acres)
<b>Total</b>							

<sup>1</sup> An estimate of the on-site acreage, generally rounded to the nearest tenth of an acre. However, for sensitive habitats (such as wetlands and vernal pools), the acreage may be presented in square footage or hundredths/thousandths of an acre.

<sup>2</sup> Include a column for impact neutral acreage if applicable. For example, all wetlands and wetland buffers are counted as "impact neutral."

## **9.0 REFERENCES**

## **10.0 LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED**

Provide a list of preparers, noting each person included on the County list of approved consultants. Note that the principal author must be on the list or the report will not be accepted.

## **TECHNICAL APPENDICES / ATTACHMENTS**

The Table of Contents shall list each document attached to the report in the order in which they are referenced in the report. The following documents must be included in the report, either in the text (if size is appropriate) or as an Attachment:

- A. Observed Species Lists, Flora and Fauna. A list of all species identified on the site, including the common name, scientific name and the vegetation community in which the species was identified.
- B. Potential Sensitive Species List, Flora and Fauna (format follows) to contain all sensitive species with the potential to reside, forage or otherwise use the site. The table will include the conservation status, preferred habitat (i.e. vegetation, soil, elevation range, etc.) and whether the species was detected on the site. For species not detected, the table will include a determination of the potential for the species to be present currently or in the future and factual basis for that determination (the probable reason why the species was not detected during the survey).
- C. A California Natural Diversity Database Form (CNDDDB) must be attached to the final report for each sensitive species that was identified on the site. A copy of the CNDDDB form shall also be sent to the CDFG.
- D. Biological Resource Map and project plot plan/map (if not clearly shown on the biological resource map), unless these are included as clear reduced figures elsewhere in the document (clear 11x17-inch maximum figures are preferred).

- E. Open Space Map and reduced copy of the Open Space Map to be included within the document (11x17 inch max), showing location of fencing and signage, if open space easements are proposed.
- F. Signed survey reports for all directed or focused surveys. When applicable, a copy of the survey results letter sent to USFWS should be included. Signed survey reports may be bound separately from the main report to eliminate the need to resubmit the signed survey report if further revisions to the Biological Resource Report are necessary.
- G. Vicinity and USGS topographic maps if not included elsewhere in the document.
- H. Any other documents necessary to supplement the information provided within the biological report.

**Sensitive Species Table Format.** The County will provide a list of sensitive plant and animal species with the potential to exist on the project site. The report shall include each sensitive species on the list in table form documenting its sensitivity status (County, State and Federal, as appropriate), its preferred habitat and whether it was detected on-site by direct or indirect evidence. If the species was not detected, the table shall address its potential for occurrence (habitat assessment) with facts to support each conclusion. The following table shows the headings for the table that can be prepared in portrait or landscape format.

Scientific Name and Common Name	Sensitivity Code & Status (Federal, State, County, other)	Habitat Preference/ Requirements	Verified On Site Yes/No (direct / indirect evidence)	Potential to Occur On Site (Observed or L/M/H/U)	Factual basis for determination of occurrence potential

Sensitivity codes shall be defined at the end of the table.

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## **2.3 Biological Resource Letter Report**

A letter report may be adequate to document biological resources if the project site is small and/or the site has limited biological resources. Based on the information provided in the biological letter report, DPLU may require additional focused surveys and/or a Full Biological Resource Report.

### **2.3.1 Outline**

The following outline should be followed when preparing a Biological Resources Letter Report.

<b><u>Biological Resource Letter Report Outline</u></b>
<b>Summary</b>
<b>Introduction, Project Description, Location, Setting</b>
<b>Habitats / Vegetation Communities</b>
<b>Special Status Species</b>
<b>Jurisdictional Wetlands and Waterways</b>
<b>Other Unique Features/Resources</b>
<b>Significance of Project Impacts and Proposed Mitigation</b>
<b>Cumulative Impacts</b>
<b>References</b>
<b>Preparer and Persons/Organizations Contacted</b>
<b>Attachments</b>

### **2.3.2 Contents**

#### ***Summary***

Provide a brief summary of the project, the biological resources present on the site, potential impacts and proposed mitigation. No new information should be provided in the summary that is not further explained elsewhere in the document. The purpose of the summary is to provide a quick reference for the public and decision-

makers. Therefore, the language should be less technical than that used in the remainder of the document.

### **Introduction, Project Description, Location, Setting**

Completely describe the proposed project, including all off-site impacts and fire fuel modification and vegetation management requirements. Provide a brief summary of the project location, survey dates and times, and biological resources present on the site.

### **Habitats / Vegetation Communities**

- Estimate acres present for each habitat type / vegetation community, rounded to the nearest tenth of an acre. However, for sensitive habitats (such as wetlands, jurisdictional waters, and vernal pools), the acreage may be presented in square footage or hundredths/thousandths of an acre.
- List dominant (indicator) species present.
- Describe habitat quality, including the level of previous disturbance.
- Discuss species abundance, composition and diversity in terms of vegetative structure and wildlife present.
- Determine and factually support the habitat sensitivity level (i.e. Tier level in MSCP) for each habitat type.
- Discuss the conservation value of each habitat type in terms of regional and local importance relative to other areas of similar habitat off-site.

### **Special Status Species**

- Address all sensitive species with potential to occur on the site or on land immediately adjacent to the site.
- When a sensitive species is identified on a property, provide the number and density of individuals. It may also be necessary to provide these measurements for off-site areas in order to fully determine the true size and extent of the local population. When feasible, the actual number of individuals should be counted in the field. When a plant species covers several acres (3 acres or more), the number and density may be estimated using a quadrat sampling method. When the plant species is a ground-cover variety or individuals are not easily discernable from one another, acreage may be used as a measurement and the density presented as a percentage cover per acre. For animal species, the number of individuals should be approximated based on actual sightings and other available signs, such as fecal deposits, tracks and nests or burrows. The method by which the number of individuals and density of a species is determined must be described in the biological report.
- Generally, if protocol or focused surveys are required a Full Biological Report is required. However, if Protocol Surveys are required with a Letter Report, summarize the report conclusions and attach the Protocol Survey report. If focused surveys (non-protocol surveys) are required, the Letter Report shall

present the field methods and results. Focused surveys must be done by biologist(s) with demonstrable knowledge in field detection of the subject species. Protocol surveys for federally listed species must follow USFWS protocol. Permit numbers for biologists performing these focused surveys must be provided and field notes for each survey must be attached to the biological report. All point locations and inferred territories of these species must be included on the Biological Resources Map. For species too numerous to map or where exact locations are not known, a notation on the map will suffice.

### **Jurisdictional Wetlands and Waterways**

- Describe all wetland and water resources found on the site.
- Estimate acres classified as County, State and/or Federal wetlands along with an explanation as to how the boundaries were delineated.
- Include a brief list of the dominant plant and wildlife species present that were either detected or likely using the site.
- Describe wetland habitat quality including disturbance, canopy cover, species diversity and connectivity to off-site habitat.
- Discuss the wetland in terms of local and regional importance.
- Wetlands must be accurately plotted on the Biological Resources Map.

### **Other Unique Features/Resources**

Include a brief description of any unique features/resources, including, but not limited to:

- Wildlife Corridors and Linkages
- Topography/Connectivity
- Regional or Local Setting
- Other biological functions such as foraging, hill-topping, roosting, rock outcroppings
- Sensitive soils

### **Significance of Project Impacts and Proposed Mitigation**

The letter report shall discuss all significant impacts to biological resources, and shall propose applicable and feasible mitigation measures that will reduce impacts to less than significant.

### **Cumulative Impacts**

A reasonable list of cumulative projects should be compiled based on past, present, and future projects that could also cumulatively contribute to the project's significant biological impacts. Analyze the significance of the cumulative impact. Determine whether the project makes a cumulatively considerable contribution to the impact. The report should address each resource in terms of potential cumulative impacts. When the project's contribution to the cumulative impact is significant, the analysis

should include a discussion of mitigating effects of existing regional conservation plans if applicable. Mitigation may also include a reduction in the project's contribution, or a specific on- or off-site mitigation plan.

## **References**

## **Preparer and Persons/Organizations Contacted**

Biological Resource Letter Reports must be prepared by a County-approved consultant.

## **Attachments**

The following documents should be included in the report, either in the text (if size is appropriate) or as an Attachment:

- Observed Species Lists, Flora and Fauna. A list of all species identified on the site, including the common name, scientific name and the vegetation community in which the species was identified.
- Potential Sensitive Species List, Flora and Fauna (format follows) to contain all sensitive species with the potential to reside, forage or otherwise use the site. The County will provide a list of sensitive plant and animal species with the potential to exist on the project site. The report shall include each sensitive species on the list in table form documenting its sensitivity status (County, State and Federal, as appropriate), its preferred habitat and whether it was detected on-site by direct or indirect evidence. If the species was not detected, the table shall address its potential for occurrence (habitat assessment) with facts to support each conclusion. Sensitivity codes shall be defined at the end of the table.
- California Natural Diversity Database Form(s) (CNDDB) must be attached to the final report for each sensitive species identified on site. A copy of the CNDDB Form shall also be sent to the CDFG.
- Biological Resources Map including a reduced copy within the letter report.
- Open Space Map including a reduced copy of the Open Space Map in the report, if Open Space is proposed.
- Signed survey reports for all directed or focused surveys. When applicable, a copy of the survey results letter sent to USFWS should be included. Signed survey reports may be bound separately from the letter report to eliminate the need to resubmit the signed survey report if further revisions to the Biological Letter Report are necessary.
- Vicinity and USGS topographic maps and aerial photograph if not included elsewhere in the document.
- Any other documents necessary to supplement the information provided within the biological letter report.

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## **3.0 BIOLOGICAL RESOURCE MAPPING GUIDELINES**

### **3.1 Extent of Mapping Required**

#### **3.1.1 Project Boundary**

Biological Resource mapping must include the entire project parcel(s) plus 100 feet onto adjoining properties. In rare cases where a project only affects a small portion of a large parcel, the need to map the entire parcel may be waived. If you wish to pursue this waiver, contact the Department of Planning and Land Use (DPLU) Project Manager.

#### **3.1.2 Off-site Improvement Areas**

Any required off-site improvements (e.g., road improvements, fire fuel modification and vegetation management requirements, utility extensions, etc.) must be mapped in accordance with these requirements. Mapping should include maximum area necessary to complete the improvement

#### **3.1.3 Off-site Biological Mitigation Areas**

If off-site biological mitigation is proposed and the off-site area is not part of a formally adopted mitigation bank, the proposed areas must be mapped in accordance with these requirements.

### **3.2 Map Layout**

#### **3.2.1 Base Map**

The Biological Resource Map must be completed using a base map that includes:

- The most recent project plot plan including all utility, road and proposed easements.
- The proposed maximum limits of disturbance for the project (on and off site); including grading, fire fuel modification and vegetation management requirements, septic systems, wells, construction staging areas, road improvements, drainage improvements, etc.
- Proposed Biological Open Space/Conservation Easements.
- Limited Building Zone Easements. These easements must be located adjacent to all biological open space easements to prevent fire fuel modification and vegetation management within biological open space areas. They must be a minimum of 100 feet in width but may be wider if warranted by the appropriate fire authorities or by the Fire Protection Plan for the project (where applicable). See Attachment B of these guidelines for a visual depiction of Limited Building Zone Easements.
- Existing Easements. All existing easements must be shown and labeled. This includes previously dedicated biological open space easements, steep slope easements, road easements, utility easements, etc.
- Topography (County topographic data is sufficient).

- Major roads and major road names.
- Both proposed (solid lines) and existing (dashed lines) parcel/lot lines.
- Assessor Parcel Numbers
- North arrow
- Bar Scale

NOTE: If the scale and the quantity of information on the map render the map illegible or overly complex, the map scale should be reduced or the information should be divided between the base map and an “overlay” map.

### **3.2.2 Scale**

Acceptable scales are 1" = 20' through 1" = 200'. The maximum allowable size of the map sheet is 48" x 36". Each map shall include a bar and number scale. Regardless of the scale used, the map must be legible. Note: Scale should be appropriate to fit entire project on one sheet and to clearly view the resources and legend. For extremely large project sites that would not fit on one sheet at the above scales, coordinate with the County Staff Biologist to determine appropriate scale.

### **3.2.3 Multiple Sheet Maps**

Biological Resource Maps must be one contiguous sheet of the entire project parcel(s) unless, given the scale and legibility limitations described above, a project's size prohibits the use of a single sheet map using the acceptable scale (a maximum project parcel dimension of approximately 9000' x 6500'). In the rare occasion that the map cannot be placed on a single sheet, a multiple sheet map is acceptable. All multiple sheet maps must have a larger scale, single-sheet index map showing the relationship of all detail sheets. Each detail map sheet must meet all of the requirements listed in this document and be of a consistent scale.

### **3.2.4 Submittal Requirements**

For initial and other draft submittals, three to five copies of the Biological Resource Map shall be submitted. The number of maps necessary at submittal will depend on whether consultation/meetings with the resource agencies will be required. Upon finalization, additional copies will be required based upon public review and/or public hearing requirements. With the final document, a digital version of the Biological Resource Map shall be submitted in accordance with DPLU Electronic Document Guidelines.

### **3.3 Habitat Identification**

#### **3.3.1 Required Habitat Classification System**

All Biological Resource Maps and studies shall incorporate the modified Holland code classification system for vegetation communities. A Holland Classification must cover all areas on the project site and surrounding area. The map legend must reference both the Holland numeric code as well as the Holland vegetation community name.

The following references shall be used for vegetation:

- Holland, R. F., 1986, *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program, State of California, Department of Fish and Game, Sacramento, CA, 157 p.
- Oberbauer, T., 1996, *Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions*, 6 p.

#### **3.3.2 Mixtures of Habitat Components**

Where vegetation contains a mixture of component and indicator species from two or more Holland vegetation communities, the indicator species that appear with the greatest vegetation coverage shall be used to identify the vegetation community.

#### **3.3.3 Burned Habitat**

Areas recovering from fire shall be mapped using the resurgent vegetation as indicators of the probable resultant habitat. When the fire is so recent that no new vegetation has emerged, historical evidence such as aerial photos and the County's vegetation mapping information shall be used to map the habitat that was burned.

#### **3.3.4 Previously Graded/Cleared Lands:**

- Unauthorized Grading/Clearing – Areas graded or cleared without a legal permit or authority shall be mapped as the vegetation type present prior to the unauthorized activity (forensic mapping) based on County records and regardless of the time that has lapsed. Historical evidence, such as aerial photography or the County's vegetation mapping information, shall be used to determine the habitat that once existed.
- Legal Clearing Related to Preparation of Land for Development – Areas legally graded or cleared in preparation for the proposed project shall also be mapped as the habitat that existed prior to the clearing unless previous environmental review was conducted and appropriate mitigation applied. The California Environmental Quality Act requires assessment of the "whole of the proposed project" which includes activities completed in preparation for the project. Examples include

geotechnical testing, septic testing, well drilling/testing, surveying and recent (less than 5 years prior to project application) clearing or grading (including agricultural clearing or grading) completed without a clear documented purpose. Historical evidence, such as aerial photography or the County's vegetation mapping information shall be used to determine the habitat that once existed.

- Legal Clearing – Areas graded or cleared with legal authority (i.e. upon issuance of a County permit) that are not related to preparing the land for development may be mapped as the existing disturbed land, developed land, agriculture or other appropriate habitat type.

### **3.3.5 Additional Habitat Identification Information**

While Holland gives information regarding habitat attributes, the following additional guidance shall be followed in determining the proper code for disturbed land, non-native grassland, agriculture, coastal sage-chaparral scrub, and native grassland classifications:

- Developed (Holland 12000) – Land that has been constructed upon or otherwise covered with a permanent unnatural surface shall be considered Developed. Areas where no natural land is evident due to a large amount of debris or other materials being placed upon it may also be considered Developed (i.e. car recycling plant, quarry, etc.).
- Disturbed Land (Holland 11300) – Disturbed land includes areas in which the vegetative cover comprises less than 10 percent of the surface area (disregarding natural rock outcrops) and where there is evidence of soil surface disturbance and compaction from previously legal human activity; or where the vegetative cover is greater than 10 percent, there is soil surface disturbance and compaction, and the presence of building foundations and debris (e.g., irrigation piping, fencing, old wells, abandoned farming or mining equipment) resulting from legal activities (as opposed to illegal dumping). Vegetation on disturbed land (if present) will have a high predominance of non-native and/or weedy species that are indicators of surface disturbance and soil compaction, such as Russian thistle (*Salsola tragus*), telegraph weed (*Heterotheca grandiflora*), horehound (*Marrubium vulgare*), and sow-thistle (*Sonchus oleraceus*). Although non-native grasses may be present on disturbed land, they do not dominate the vegetative cover. Examples of disturbed land include the following activities, if preformed under legal means: recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old homesites.
- Non-native grassland (Holland 42200) – Non-native grassland is a mixture of annual grasses and broad-leaved, herbaceous species. Annual species comprise from 50 percent to more than 90 percent of the vegetative cover, and most annuals are non-native species. Non-native grasses typically comprise at least 30 percent of the vegetation, although this number can be much higher in some years and lower in

others, depending on land use and climatic conditions. Usually, the annual grasses are less than 1 m (3 ft) in height, and form a continuous or open cover. Emergent shrubs and trees may be present, but do not comprise more than 15 percent of the total vegetative cover. Characteristic non-native grassland species include foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), wild oats (*Avena* spp.), fescues (*Vulpia* spp.), red-stem filaree (*Erodium cicutarium*), mustards (*Brassica* spp.), lupines (*Lupinus* spp.) and goldfields (*Lasthenia* spp.), among others. This definition is consistent with non-native grassland definitions in conservation plans adopted by other jurisdictions within San Diego County.

- Agriculture (Holland 18000-18320) – Agriculture refers to lands subject to routine and ongoing commercial operations associated with farm, grove, dairy or other agricultural businesses. Agriculture shall include: (1) The cultivation and tillage of the soil; crop rotation; fallowing for agricultural purposes; the production, cultivation, growing, replanting and harvesting of any agricultural commodity including viticulture, vermiculture, apiculture, or horticulture; (2) The raising of livestock, fur bearing animals, fish, or poultry, and dairying; (3) Any practices performed by a farmer on a farm as incident to or in conjunction with those farming or grove operations, including the preparation for market, delivery to storage or to market, or delivery to carriers for transportation to market; and (4) Ordinary pasture maintenance and renovation and dry land farming operations consistent with rangeland management and soil disturbance activities. All such activities must be consistent with the economics of commercial agricultural operations and other similar agricultural activities. Irrigation or disking alone does not indicate an improved pasture. Grazing land (“unimproved pastureland”) continues to retain the biological value of grassland and may not meet the Agriculture vegetation classification. Agricultural land left fallow may revert to non-native grassland habitat or other native/naturalized habitat. An assessment shall be made as to whether the land now supports native or naturalized habitat after an absence of active agricultural activity, such as seeding or harvesting for four or more years.
- Coastal sage-chaparral scrub – Coastal sage scrub and southern mixed chaparral are identified by the dominant indicator species present. In cases where the two habitats are co-dominant and at least 50% of the habitat is indicative of coastal sage scrub, then the habitat shall be labeled as “coastal sage-chaparral scrub”.
- Native Grassland – There is often a debate as to how to delineate native and non-native grassland, particularly when one often occurs as one or more patches within a larger expanse of the other. Native grassland (Holland 42100) should be identified when *Nassella* and other native herbs including *Sanicula*, *Sidalcea*, *Sisyrinchium*, *Eschscholzia* or *Lasthenia* are present. The percentage cover of Native species at any one time may be quite low. An area will qualify as Native Grassland if more than a 20% cover of native perennial species is present using a 1 x 1 meter quadrat.

### **3.4 Sensitive Species, Other Habitat Features and Wetland Mapping Requirements**

#### **3.4.1 Sensitive Species**

Locations/areas of observed sensitive plant and animal species shall be identified on the biological resources map. Sensitive species locations/areas should not be delineated from, but included within the mapped habitat classification that surrounds the sensitive species locations/areas. For species too numerous to map or where exact locations are not known, a notation on the map will suffice.

#### **3.4.2 Significant Habitat Features**

Habitat features such as caves, rock outcroppings or cliff faces, shall be identified. It is understood that many of these features do not have a unique Holland Classification. Therefore, while these significant habitat feature areas must be included, a valid and appropriate Holland Classification must nonetheless identify all areas mapped. Habitat features should not be delineated from, but included within the mapped habitat that surrounds the feature (usually as some form of crosshatching).

#### **3.4.3 Jurisdictional Wetlands and Waterways**

County, State and Federally defined wetlands and waters of the U.S. may be included within several Holland vegetation communities. These communities are typically riparian in nature, such as southern coast live oak riparian forest and southern willow scrub. However, a wetland or waters of the U.S. may occasionally be within a vegetation community that is normally considered upland, such as a coastal sage scrub vegetated drainage. The boundaries of all wetlands and waters of the U.S. must be mapped in addition to the vegetation/habitat per the Holland Codes. This can usually be accomplished using crosshatching or similar methods. In all cases, the treatment of land considered wetlands and waters of the U.S. should follow wetlands standards and guidelines at the County, State and Federal level, regardless of the overlying vegetation type.

The following is the County Resource Protection Ordinance (RPO) wetland definition:

*“All lands which are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or where the land is covered by water. All lands having one or more of the following attributes are “wetlands”:*

- a. At least periodically, the land supports predominantly hydrophytes (plants whose habitat is water or very wet places);*
- b. The substratum is predominantly undrained hydric soil; or*
- c. The substratum is non-soil and is saturated with water or covered by water at some time during the growing season of each year.”*

A “non-soil” substrate includes, but is not limited to, rock outcroppings, deepwater habitats (generally greater than 6.6 feet in depth), cobble rock, bedrock or scoured channels.

The above definition of wetlands is based on the same basic attributes (hydrophytic vegetation, hydric soils, and hydrology) as those of the California Department of Fish and Game (CDFG) and the U.S. Army Corps of Engineers, although those agencies have definitions with slightly different language and requirements.

**Simplified Method of Wetlands Mapping** – This method may be used in most cases where riparian vegetation, areas of potentially hydric soils and drainage features with a defined bed and bank are/will be largely avoided through project design and the applicant wishes to minimize processing costs. The mapping of wetlands and/or waters of the U.S. can often be completed with site visits and review of aerial photographs, and with topographical, vegetation and soil maps. Under this method wetlands and/or waters of the U.S. are conservatively identified to extend to the outermost limit of riparian vegetation (canopy drip line or scrub line boundary), hydric soils, or the defined bed and bank of a drainage feature, whichever is greatest.

**Formal Method of Wetlands Mapping** – A formal wetland delineation may be completed under the following conditions: 1) there may be extensive impacts (both direct and indirect) to or within the immediate proximity of identified County, State and/or Federal wetlands and waters of the U.S., 2) the project applicant believes that using the simplified method of wetlands mapping results in an overly conservative delineation of the extent of wetlands, 3) there is disagreement between the County and the individual completing the delineation. Under this method the delineation must conform to the *Army Corps of Engineers 1987 Wetland Delineation Manual*, understanding that the County definition of a wetland differs from the federal and state definitions. The boundaries of all wetlands and waters of the U.S., as defined by each of the agencies, must be clearly identified. When a formal wetland delineation is completed, a separate wetland delineation map is required *in addition* to showing the extent of wetlands on the Map. Data sheets or other information that was used to complete the delineation should be provided in addition to the mapping.

#### **3.4.4 Wetland Buffer**

The boundary of all wetland buffers must be mapped in addition to the vegetation/habitat per the Holland Codes. This can usually be accomplished using crosshatching or similar methods. The following is the wetland buffer definition from the Resource Protection Ordinance:

*“Lands which provide a buffer area of an appropriate size to protect the environmental and functional habitat values of the wetland, or which are integrally important in supporting the full range of the wetland and adjacent upland biological community.”*

The County requires buffers of a minimum of 25 feet and a maximum of 200 feet. The following factors are typically considered in determining the appropriate width of the buffer: the current setting of the project site (natural v. disturbed), the quality of the vegetation communities on site, the presence/absence of wildlife, and the size of the wetland.

#### **3.4.5 Oak Woodlands**

For oak woodland habitats, the edge of the canopy defines the woodland boundary. To protect the sensitive root systems of this habitat, a 50-foot buffer, measured outward from the outside edge of the canopy, must be included on the map.

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## **[Attachment A]**

### **Typical Mitigation Measures**

When it has been established that a significant impact will potentially occur, the project must propose mitigation to lessen or compensate for the impact. As defined by CEQA (Section 15370), mitigation includes either measures to avoid, minimize or rectify impacts or measures that compensate for impacts by replacing or providing substitute resources. The following is a list of typical mitigation measures that may be included as conditions on a project that has significant impacts:

#### **Biological Open Space/Conservation Easement**

A Biological Open Space/Conservation Easement is required to preserve land on-site either as a means of avoidance of a particular resource or for mitigation for impacts elsewhere on the site. If the preservation is to be considered for credit towards mitigation requirements, the easement must be designed in accordance with the Project Design Guidelines. All restrictions and any possible exceptions to the open space easement shall be included in the easement language. For example, if trails are planned, they shall be listed as an exception with a detailed description of allowable uses and location (preferably referencing a map). Open space easements that protect wetlands will require an exception for vector control by the Department of Environmental Health (DEH) and may require an exception to allow future flood control prevention activities (discuss with the Department of Public Works to evaluate when this applies). In all cases where revegetation and/or resource management plans are required, easements shall be written to allow implementation of these plans, including allowing access by the appropriate habitat managers.

The only difference between an open space easement and a conservation easement is that the California Department of Fish and Game is named a Third Party to a conservation easement for enforcement purposes. Conservation easements shall be required for all projects within the MSCP when the open space is considered a Biological Resource Core Area (and therefore, part of the Preserve).

#### **Areas Labeled as “Not A Part” on Plot Plans**

This is not an easement, but rather a designation on the plot plan for either a Major or Minor Use Permit. These areas are protected just as areas within an open space easement. A Use Permit Modification” and subsequent environmental review would be required before these areas could be graded, cleared, developed or otherwise disturbed. In addition to designating the area on the plot plan, a condition will be placed on the use permit stating these areas are to remain protected for the life of the use permit. Any use exceptions (i.e., trails, etc.) shall be included in the Use Permit conditions.

### **Limited Building Zone Easement**

This easement is required adjacent to any on- or off-site biological open space or conservation easement. The easement prohibits the building of structures that would require vegetation clearing within the protected open space for fuel management purposes. The Limited Building Zone shall extend at least 100 feet from the open space boundary. This distance may be extended if required by the Fire Protection Plan. The easement shall include the provision to allow structures that do not require fire fuel modification/vegetation management. See Attachment B of these guidelines for a graphic depicting the Limited Building Zone Easement.

### **Off-site Purchase or Preservation of Habitat**

This includes the purchase of habitat credits within a County approved mitigation bank. Prior to accepting the purchase to fulfill mitigation requirements, the County may request accounting of habitat credits from the bank and evidence that the bank is managing the land appropriately. If the required habitat cannot be found within a bank, the preservation of habitat within open space easements on privately-owned land may be allowed. In these cases, a biological survey of the proposed mitigation land will be required to verify mitigation requirements have been met. An open space or conservation easement must be dedicated over the land. In addition, the County will require a Resource Management Plan for the long-term care of the habitat and will require an endowment of secured funding for perpetual maintenance of the property.

### **Revegetation Plans**

To satisfy the County's no-net-loss policy for wetlands, any impacts to wetlands requires the creation of wetlands either on or off-site. A Revegetation Plan shall be prepared for all wetland creation and restoration efforts. Although revegetation is not typically allowed as mitigation for upland habitat impacts, a Revegetation Plan may be required to enhance or repair upland areas as well.

A conceptual Revegetation Plan outlining the draft revegetation plans will be required during the processing of a discretionary project, and will be distributed during the CEQA public review period. The project will then be conditioned to submit for approval a final Revegetation Plan completed in accordance with the County's Revegetation Requirements.

The actual revegetation condition placed on the project shall outline any specific requirements for the revegetation project (i.e., acreages, types of vegetation, specific species, location, etc.). In all cases, whether explicitly stated or not, only native species should be used. When possible, the seed or plant stock used should be harvested from the vicinity of the revegetation site. A condition to dedicate an open space easement over the area to be revegetated shall be included as a separate project condition.

### **Root Stock, Seed or Specimen Collection**

Some projects may be required to collect specimens or genetic material either from the general area or in some cases, specifically from the area being impacted. This may either be in conjunction with a Revegetation Plan or a separate species-based mitigation requirement. The condition shall provide exact requirements, including collection locations and location to be transplanted to or kept in storage (if a seed bank were created).

### **Enhancement of Open Space**

This may be required when the open space would benefit from enhancement activities, such as removal of exotic species, hydroseeding or cowbird trapping. Enhancement may be required when edge effects from the proposed project are expected to be fairly high or when the project requests mitigation credit for on-site open space over disturbed areas. The exact enhancement activities required shall be outlined in the condition placed on the project.

### **Resource Management Plans (RMP)**

A Resource Management Plan shall be required when a project proposes open space that would significantly benefit from active management and monitoring. RMPs are also required when a project proposes purchase of off-site habitat that is not within a formal mitigation bank. The intent of an RMP is to ensure the viability and value of the open space is maintained in perpetuity. RMPs shall be prepared based on the County's RMP guidelines, when a project proposes open space totaling 50 acres or more. RMPs may also be required when open space less than 50 acres is proposed if a particularly sensitive resource is present that would benefit from active management and/or monitoring.

Projects shall be conditioned to submit the RMP for approval prior to any grading, clearing or other development of the site. The RMP shall outline the timeline for any additional submittals that may be required, including monitoring reports, annual statements that all fencing/signs are present, etc.

### **Transfer Fee Title of Open Space to the County or Other Entity**

Transferring fee title shall generally be required whenever open space is presented as a separate lot on a parcel map. The open space may be deeded to an established conservancy group upon the approval of the Director of DPLU or to the County Department of Parks and Recreation (DPR). If deeded to a conservancy group, dedication of an open space or conservation easement over the land will also be required. DPR will review sites for suitability before deciding whether to accept fee title. If accepted, DPR will decide the terms and conditions of the transfer, including endowments, on a project-by-project basis.

### **Breeding Season Avoidance**

Grading, clearing and improvement plans will be conditioned to occur outside of the relevant time period for any species of concern on a particular site.

### **Permanent Signs**

Signs may be required where needed along open space boundaries or within open space (i.e., along trails) to prevent encroachment into the sensitive areas. The number and location of the signs will be based on a number of project and site specific factors, such as lot shapes and sizes, biological resources present, topography and intensity of expected encroachment.

### **Permanent Fencing or Walls**

Fencing or walls will be required where needed along open space easement boundaries to limit encroachment into the open space. Similar to signs, the location of permanent fencing or walls will be based on project and site-specific factors, such as lot shapes and sizes, biological resources present, topography and intensity of expected encroachment. Permanent fencing or walls shall generally be required when open space is proposed within 300 feet of development or when open space is included within residential lots less than 5 acres in size. Fencing and walls need only be installed between development and open space and should not be placed between on and off-site contiguous open space. The design and materials of fencing and walls will generally be restricted when there is a biological reason to do so, such as needing a solid wall to act as a noise barrier or requiring something impermeable to limit amphibian or small mammal movement.

### **Temporary Fencing**

Temporary fencing will be required along all open space boundaries where clearing or grading is proposed within 100 feet of on- or off-site preserved habitat and permanent fencing has not yet been constructed. Temporary fencing intends to prevent encroachment into biologically sensitive areas during grading, clearing and construction. Temporary fences are not necessary if permanent ones have already been installed (however, for many projects, permanent fencing is not installed until after grading is complete.)

### **Evidence That Federal and State Permits Have Been Obtained**

Evidence that all required permits have been obtained will be required when a project may potentially require a Federal or State permit for the take of one or more endangered species (Section 7 or 10(a) permits), for impacts to wetlands (1600 permits from CDFG or 404 permits from US Army Corps of Engineers), or for discharges (401 certification from Regional Water Quality Control Board). The applicant may show

evidence that no permit is necessary by submitting a letter from the responsible Federal or State agency.

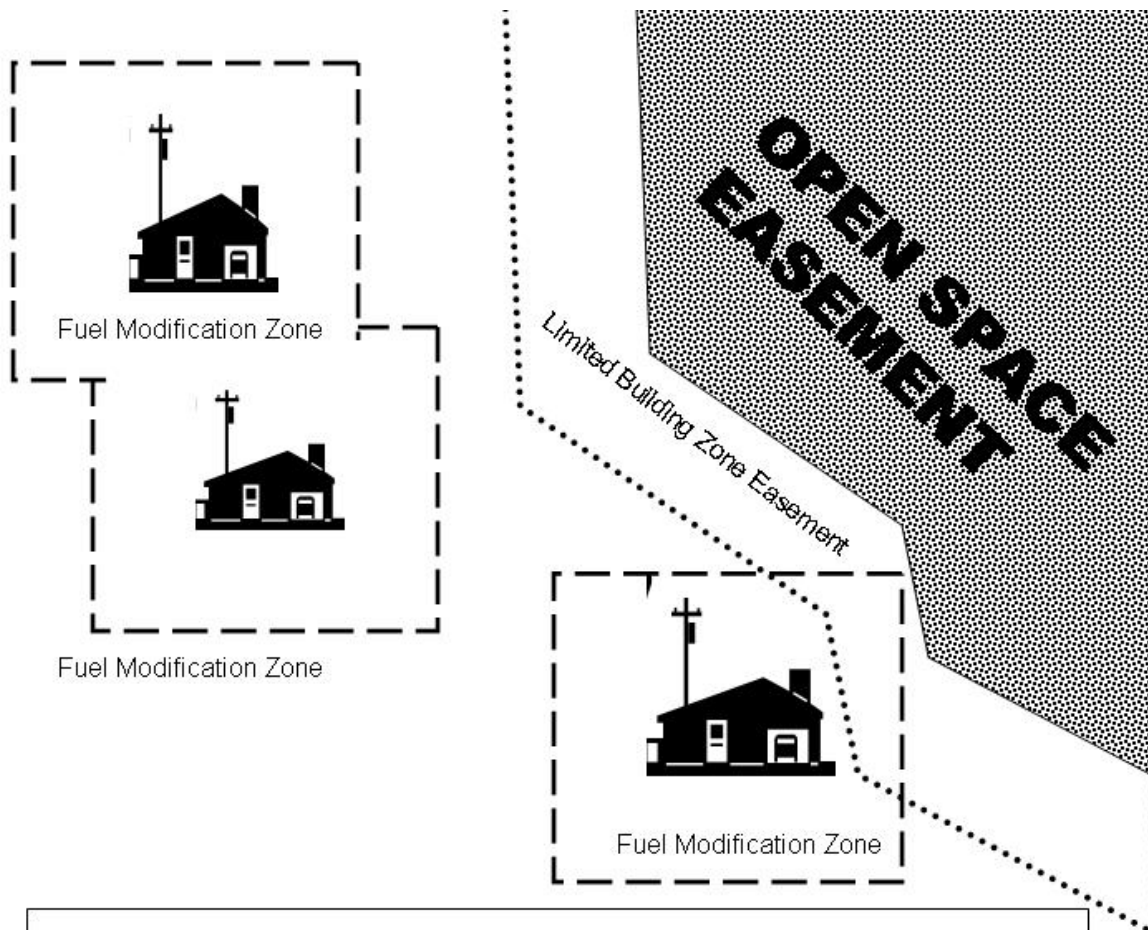
### **Restrictions on Lighting and Noise**

Certain restrictions may be required when the project proposes lighting or significant noise within close proximity to existing or proposed open space. This condition is not enforceable on subdivisions or similar projects, which involve private residential lots adjacent to the open space. Therefore, lighting and noise must be limited in those circumstances by designing the project in compliance with the San Diego County Light Pollution Code (Sections 59.101-59.115), San Diego County Noise Ordinance (Sections 36.401 et seq.) and the San Diego County Noise Element. However, conditional use permits can be conditioned to control noise and lighting, including timing and acceptable levels. The condition would extend for the life of the permit and non-compliance would allow the County to revoke the permit.

Additional measures beyond those listed above may also be necessary based on a particular project and the biological resources present. Projects should be carefully conditioned to ensure the timing for required mitigation measures is both enforceable and appropriate. Projects should be conditioned to satisfy most, if not all, of their biological mitigation prior to all grading, clearing or any other disturbance to the site. The only exceptions to this rule are mitigation measures that may only be completed after certain actions, such as permanent fencing when temporary fencing is required during grading. In this case, permanent fencing would be required prior to finalizing the map. Be aware that inside MSCP, Third Party Beneficiary Status is only conveyed after all biological mitigation measures have been satisfied. Therefore, if the conditions on these projects are not correctly timed, an applicant may not have coverage under the Endangered Species Act for impacts to listed species.

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[Attachment B]     Limited Building Zone Easements



The Difference Between Fuel Modification Zone  
and Limited Building Zone Easement

----- Fuel Modification Zone  
(also known as Fire Clearing Area)  
***Protects Structure***

..... Limited Building Zone Easement  
***Protects Open Space***

**These Zones may or may not overlap**

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## **APPENDIX C**

### **Staff Biological Review Checklist**

This checklist will be used by County staff to ensure that submitted Biological Reports address all requirements of the Biological Survey Guidelines.

	XIS1	XIS2	XIS3	Project Name and Numbers:
Document Submitted				Biological Resource Map
				Biological Resource Letter Report
				Full Biological Resource Report
Biological Resource Map				Was an appropriate scale used?
				Does map include the latest project plot plan?
				Signed by an approved County consultant?
				All locations of sensitive species shown or appropriately noted?
				Include proposed Open Space Easements and Limited Building Zone Easements?
				Show all off-site project impacts?
Report Preparer				Show resources within 100 feet of project boundary?
				Prepared by a County Approved Consultant?
Project Description				Does project description include all off-site project impacts, (fire fuel modification/vegetation management, access roads, utility lines, construction staging, etc.)?
				Does report discuss all on-site project impacts, including location of leach fields, fire fuel modification/vegetation management areas and specifications, graded areas, access, noise producers (pump stations), treatment control BMPs, landscaping, and lighting, as applicable?
Survey Methods				Was survey time and season appropriate?
Habitats				Do all habitats on site have a site-specific description and acreage?
				Do the acreages add up to the total project site size?
Sensitive Species				Check scoping letter: were all requested focused surveys done?
				If Protocol surveys done, does report include permit number of surveyor?
				Check sensitive species list provided with the scoping letter: Does the report address all sensitive species?

	XIS1	XIS2	XIS3	Project Name and Numbers:
Sensitive Species (continued)				Check report's species list and focused surveys for additional sensitive species that should be discussed.
				Does the report adequately discuss potential raptor foraging and nesting?
				Does the report adequately discuss large mammal use of the site?
				Does the report adequately discuss local and/or regional wildlife corridors and/or linkages?
				Does the report adequately discuss native wildlife nursery sites?
				For Final Reports, report includes a copy of NDDDB form?
Wetlands				Are there RPO wetlands on site?
				Are appropriate wetland buffer(s) proposed for all RPO wetlands?
				Are all wetlands and wetland buffers included in Open Space Easements?
Open Space				Does the project propose Open Space? Is the design appropriate for protection of specific resources? Are biological buffers included where necessary?
				Are all Open Space Easements surrounded by at least 100-foot (check Fire Service letter) Limited Building Zone Easements?
				Do you suspect that fire modeling is required to identify a larger LBZ easement?
Impact Analysis				Does the report adequately discuss direct project impacts?
				Does the report adequately discuss indirect Project Impacts?
				Does the report adequately discuss cumulative Project Impacts?
Proposed Mitigation				Are Mitigation Ratios correct?
				Is On-Site Preservation Proposed?
				Is Off-Site Mitigation Proposed?
CEQA Conclusion				Has project has mitigated all biological impacts to less than significant?
				Does the project have significant unmitigated biological impacts?

Staff Completing Checklist: \_\_\_\_\_

Date: \_\_\_\_\_

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